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ABSTRACT

This is the first part of a two-part fifth volume in a series of annual reports on the status of vocational education in the United States. It primarily reports the developments that have taken place each year in the numbers and characteristics of students enrolled, programs, costs, and results. (The entire study, initiated by Congress in 1971, is known as Project Baseline.) Chapter I is a brief overall summary of the past five years, and chapter II is a summary of the statistical tables in Part 2 (a separate document) of this report as well as previous years. Information covers enrollment (expansion in 1974-75, growth among the States, occupational areas, co-op, youth organizations, percent of secondary students, analysis of data on women, disadvantaged and handicapped, and ethnic minorities), expenditures, completions and placements, instructional personnel, and manpower training under CETA. Chapter III discusses title II of the Education Amendments of 1976 (Vocational Education Act) and examines some serious data problems. Chapter IV discusses information on vocational education that has not been covered by previous and present statistical summaries i.e., impact of Federal legislation, strengths and weaknesses of vocational education today, student benefits, duplication between manpower training and vocational education. The financing of continued expansion of vocational education in the face of dwindling tax resources is discussed in Chapter V. Chapter VI is largely a discussion of Project Baseline's role in the five years of its existence and what its role may be in the future. Appendixes include the text title II of the Education Amendments of 1976 and other data related to the Baseline project. (SH)

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LEARNING A LIVING ACROSS THE NATION
VOLUME V

PROJECT BASELINE
FIFTH NATIONAL REPORT
Baseline Year: 1974-75 (Fiscal Year 1975)
Part 1: Narrative Report

Prepared For

U.S. OFFICE OF EDUCATION

and

THE NATIONAL ADVISORY COUNCIL ON VOCATIONAL EDUCATION

By

Arthur M. Lee, Project Director
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November 1976

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"..... It must be considered that there is nothing more difficult to carry out, nor more doubtful of success, nor more dangerous to handle, than to initiate a new order of things. For the reformer has enemies in all those who profit by the old order, and only lukewarm defenders in all those who profit by the new ....."

Machiavelli

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INTRODUCTION

This is the fifth volume in a series of annual reports on the status of Vocational Education in the United States. Its purpose is primarily to report the developments that have taken place each year in the numbers and characteristics of students enrolled, programs, costs, and results. The entire study, initiated by Congress in 1971, is known as Project Baseline. Each report, while cumulative, stands alone. Acquaintance with previous volumes in the Baseline series is sometimes helpful in knowing what to look for, but it is not essential.

Each volume is organized a little differently than its predecessor, to increase its usefulness. For example, last year's report, like the one before that, contained a summary and recommendations in the first chapter. This one does not. The summary is omitted because Chapter I is itself a summary of the past five years, and Chapter II is a summary of the statistical tables in Part 2 for 1974-75 as well as previous years. Summaries of the other chapters might have been useful, but the question and answer format makes scanning easy and enables the reader to pick up additional explanation and comment. The question topics are listed in the Table of Contents this year to make selective scanning and quick reference easier.

There is no separate list of recommendations in the current volume. Congress has enacted new major legislation designed to correct problems under the previous Act and to improve and strengthen Vocational Education in a number of ways. Another list of recommendations before the new legislation has even had time to take effect would not be particularly helpful.

This report, instead, focuses attention on two major areas of immediate and future concern. One is the design and implementation of a national data system for Vocational Education and the development of an occupational information data system at the national, State and local levels. A Congressional mandate to do this is discussed in Chapter III against a background of current data problems and development. The other area of concern is financing of continued expansion of Vocational Education in the face of dwindling tax resources. This is discussed in Chapter V. Project Baseline does have recommendations in both these areas, and they are included in those chapters.

Chapters I and II are based on statistical data, with conclusions and interpretations taking into account the uneven quality and limited availability of the data used. More on that in a moment. Chapters III, IV, and V are for the most part based on descriptive rather than statistical data, including empirical information. The purpose is to add substance and depth to a status report of Vocational Education from other than purely quantitative sources. Chapter VI is largely a discussion of Project Baseline's role in the five years of its existence and what its role may be in the future.

The basic statistical data used in this study come from the same sources as the Federal Government's statistics about Vocational Education -- forms prescribed by the U.S. Office of Education and filled in each year by the State agencies. But Baseline tables constructed from the data may contain different figures than those of the U.S. Office because they are sometimes more current. Baseline reports also use statistical data from the Bureau of the Census, the U.S. Department of Labor, and State education agencies -- data that are not reported to the U.S. Office of Education.

There are serious problems with some of the Vocational Education data, and these problems have been examined in detail in several previous Baseline reports and in Chapter III of the present volume. None of the national figures are completely reliable and in some cases less so than in others. They suffer from three major faults and many smaller ones. First of all, definitions are not the same from one State to another. This causes serious problems when making comparisons between States, and results in national totals that are somewhat vague as to what they really represent. Secondly, the methods of collecting and transmitting data vary from purely manual systems with rather wide margins of error in some States to quite reliable completely automated systems in others. The third major fault is that, with changing needs for data, the system is too rigid. There is an inevitable time lag of as much as three years in changing from one Federal form requiring a fixed set of data elements to a revised form in which some of the data elements have been changed and others added.

Project Baseline has had to use the data thus obtained with extreme care. The entire study was undertaken on the assumption that it is better to collect and tabulate imperfect data and gain some knowledge, however imperfect, than to have no knowledge at all. In doing so, however, an obligation was assumed to report as accurately as possible just what the data do represent. That has meant acquiring an extensive knowledge of the processes of collecting and transmitting data in each of the States.

There are two conditions that data must meet to be included in a Baseline report. One is that the source must be clearly identified and assume responsibility for the data's accuracy. The second is that all data must be returned to the States before being published in the forms in which they will appear, to provide opportunity for correction of errors. Frequently, when State agencies see their figures displayed for the first time in a Baseline printout, they find they have made mistakes in their Federal reports. In this way, a considerable amount of mutual progress toward a system of quality control has developed between the Baseline staff and State agency personnel.

Project Baseline has always been a cooperative enterprise and is becoming more so each year. Much of the credit for the final product, the annual reports and, in some years, additional supplemental reports, belongs not to the professional staff that assembles the information but to the

State Directors of Vocational Education and their staffs, who collect it in the first place and make it available. The Bureau of Occupational and Adult Education in the U.S. Office of Education has also contributed enormously to the Baseline effort each year in support, encouragement, guidance, and data acquisition. The third major participant in this cooperative enterprise has been the National Advisory Council on Vocational Education. It was given responsibility by Congress in the beginning to monitor the Baseline study, and has contributed heavily to the results. Its members and staff, together and individually, have provided a critical review of the standards of performance that the staff at Northern Arizona University has attempted to maintain.

This year for the first time Project Baseline has also used a second group for critical review of the report and advice and guidance in its development. It is an advisory council selected from among State Directors, U.S. Office of Education professional staff, researchers from other universities, National Advisory Council members and staff, and other individuals who are in unique positions to contribute their judgment and advice.

The product of this joint endeavor is not a concensus. Not all of Project Baseline's advisors and consultants agree with what is reported or with the way in which the reports are written. The Baseline staff take full responsibility for what finally emerges, including both the manner in which the data are reported and any errors in fact or interpretation. But no Baseline report, certainly not this volume, has been published without extensive restructuring and rewriting as a result of suggestions from a great many persons whose contributions have been invaluable. The author and all of the staff are profoundly grateful for their assistance.

CHAPTER I

FIVE YEARS OF VOCATIONAL EDUCATION

Any period of time will show changes taking place in Vocational Education as in any other human endeavor. Five years is a small segment of nearly sixty years of skill training in the public schools with Federal support, and less than half the time since passage of the landmark legislation of 1963. It is used here because that is the period covered by the Baseline study. After four previous annual reports, five-year perspective is now possible, and these are the results:

o Vocational Education enrollments nationally have increased substantially, but not on a straight line.

o The over-all performance in expanding Vocational Education for the disadvantaged and handicapped has lagged behind that for other students.

o Cooperative and work study programs have failed to reach more than a fraction of their potential in the growth and expansion of Vocational Education.

o Performance among the States shows wide variations in every measurable way.

o There are higher percentages of women and ethnic minority groups enrolled in Vocational Education than are found in the total population.

o Approximately half of the current high school population is reported by local schools and State agencies to be enrolled in Vocational Education.

o The employment rate of Vocational Education students available for work after they complete their program is noticeably higher than for comparable age groups in the total labor force.

o The Federal share of expenditures for Vocational Education has steadily declined compared to State and local support.

o Total expenditures for Vocational Education have increased. But the rate of increase has declined during the past three years when the effects of inflation are taken into account.

o The U.S. Department of Labor's total manpower training enrollment is equal to less than five percent of the enrollment in Vocational Education.

- A shortage of Vocational Education teachers is serious in most States and appears to be getting worse.

- Research has had an important impact on Vocational Education program development since 1963.

- State and Federal reporting have improved considerably in the past five years, but still have a long way to go.

CHAPTER II

THE FIFTH YEAR

In reporting the annual statistical changes by which progress or lack of it is measured, there are implied value judgments. More is usually reported as better. Progress is an upward line on a graph, and a downward line shows poor performance. There may be those who disagree with the assumptions underlying such judgments. As the concept of a no-growth society and a no-growth economy is increasingly discussed, questions are being raised about the expansion of Vocational Education, as well as other kinds of growth.

The value judgments in this report and the assumptions on which they are based are here for a reason. They reflect national policy as determined by Congress in the Vocational Education Act of 1963 and its subsequent amendments. That policy is to assist the States in a variety of ways "so that persons of all ages in all communities of the State . . . will have ready access to vocational training or retraining which is of high quality, which is realistic in the light of actual or anticipated opportunities for gainful employment, and which is suited to their needs, interests, and ability to benefit from such training."[1] Since the purpose of the Baseline study is to report what has happened, and much of what has happened is the result of Congressional legislation, value judgments reflecting Congressional intent are part of the report.

Enrollment

Part 2
Tables 1,
2, 9, 38-
45, 76

Did Vocational Education continue to expand in 1974-75 as it had in previous years?

Expansion was greater than at any other time during the five years. Nearly two million more students were reported enrolled in Vocational Education in 1974-75 than in the preceding year, reaching a total of 15 1/3 million. Enrollments per 1,000 population increased from sixty-three to seventy-one.

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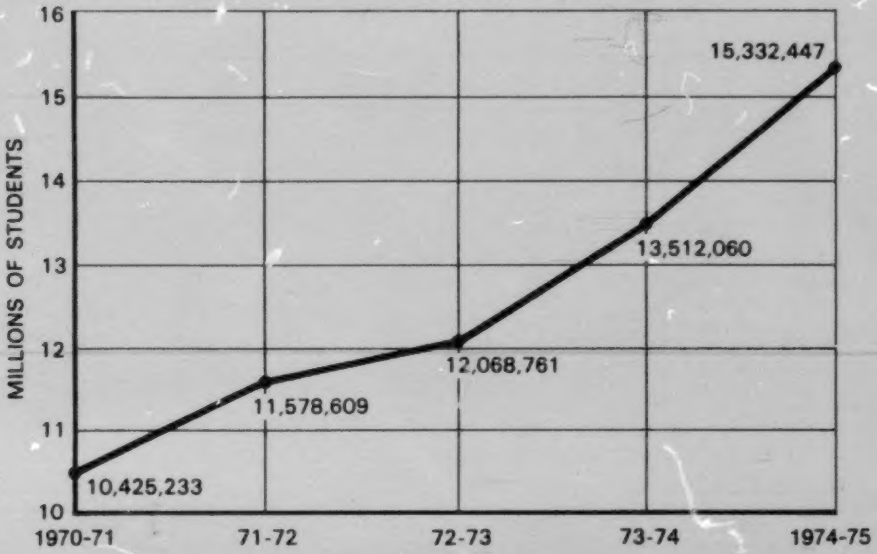
[1] "Declaration of Purpose," at the beginning of the Vocational Education Act of 1963, the Amendments of 1968, and the Amendments of 1976. For 1976 Amendments see Appendix A.

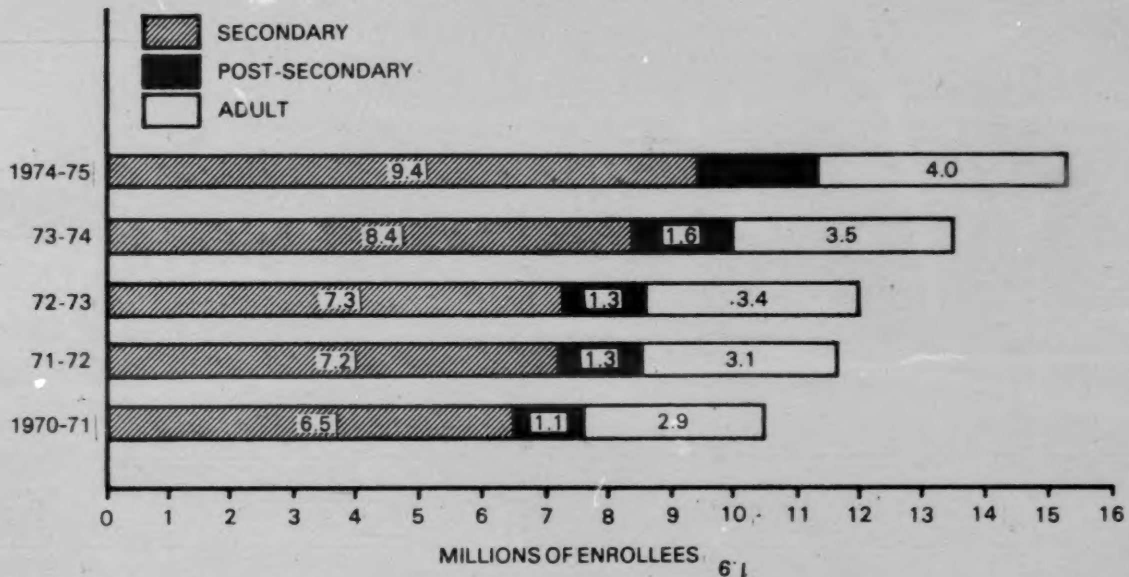
VOCATIONAL EDUCATIONAL ENROLLMENT



The percent of change in Vocational Education enrollments reached a five-year record, 13.5 percent. In contrast to previous years, it was almost equally strong at all three levels -- secondary, post-secondary and adult.

What this means is that secondary, post-secondary, and adult enrollments are growing more evenly than in the past, and if this should continue it would maintain an approximate relationship between the three in which there are roughly twice as many adults as post-secondary students and a little more than twice as many secondary students as adults.

ENROLLMENT BY LEVEL (IN MILLIONS)



It is still necessary to view these figures with some degree of caution, especially at the secondary level. Some States report only those students enrolled in programs in which they are being given skill training leading directly to employment. But other States include all students enrolled in any vocational course, whether or not single courses are considered adequate as job entry preparation. And for the past two years the confusion has been compounded because a number of States included students below grade nine and students in special programs, such as group guidance (pre-vocational), pre-post-secondary, remedial, industrial arts, volunteer fireman, and others not classified elsewhere. In 1974-75 there were 3 1/3 million Vocational Education students in these programs.

Just how much of the growth in Vocational Education then, meant growth in training for jobs? Most of it, probably. In the first place, not all States include students below grade nine and special program students in their enrollment figures, and some States include only part of them. Moreover, the total reported growth in these categories in 1974-75 was only 300,000 compared with total Vocational Education growth of nearly two million. Finally, most of these students, as well as most of those in States where they might be reported if enrolled only in single courses, are found at the secondary level, and only half of the total growth took place here. Thus, the enrollment figure reported even at the secondary level could be inflated only to a fairly minor extent by students not being directly prepared for employment.

	Total	Secondary	P-sec.	Adult	Enrollment per 1,000 Population
Enrollment 1970-71	10,485,233	6,487,446	1,116,044	2,881,735	50.1
Enrollment 1971-72	11,578,609	7,211,527	1,277,456	3,089,626	54.9
Percent of Change from 1970-71	10.4	11.2	14.5	7.2	9.3
Enrollment 1972-73	12,064,761	7,348,666	1,349,465	3,366,630	56.7
Percent of Change 1971-72	4.2	1.9	5.6	9.0	3.4
Enrollment 1973-74	13,512,060	8,387,026	1,591,400	3,533,634	63.0
Percent of Change from 1972-73	12.0	14.1	17.9	5.0	11.0
Enrollment 1974-75	15,332,447	9,418,626	1,890,180	4,023,641	70.9
Percent of Change from 1973-74	13.5	12.3	18.8	13.9	12.7

Was growth among the States as uneven as in previous years?

Part 2
Table 42

Yes, growth variations among the States continue to present Vocational educators with one of the most puzzling characteristics of national development. Variations in enrollment per 1,000 population can to some extent be explained by the different practices followed in identifying Vocational Education students. There are also different needs, different opportunities for expansion, differences in State and local resources, and sometimes different public attitudes. But it is hard to account for the annual changes in growth per 1,000 population within some States not just from State to State.

The changes are not minor. In 1974-75 they ranged from a drop of 36.4 percent in one State to a jump of 80.5 percent in another. Nor are they simply annual fluctuations that might level out over two or three years. One State during the five years from 1970-71 through 1974-75 had had an absolute decline of 5.5 percent in its Vocational Education enrollment per 1,000 population. Another State during the same period increased its Vocational Education enrollment per 1,000 population by 205.4 percent.

These are the extremes, but other States show a wide distribution from one extreme to the other. The nearest thing to a pattern is that about one-fourth the States show fairly constant annual growth rates over the five year period, indicating that Vocational Education enrollments have kept up with population changes. Another one-fourth show highly erratic growth rates with wide swinging changes from acceleration to deceleration, spectacular gains and net losses. Most of the rest either increased to a single high point during the five years and then dropped, or declined to a single low point and then started up.

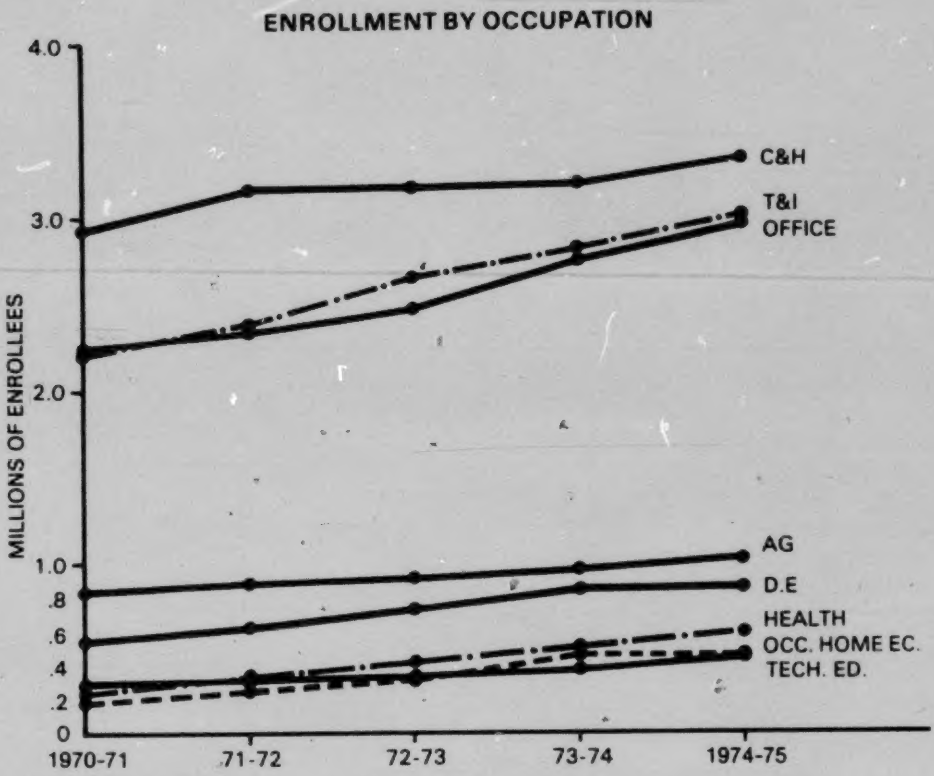
Only three States reported a steadily increasing rate of growth in their vocational enrollments, and thus a steadily accelerating growth. One State reported a steadily decreasing rate of growth, with annual increases per 1,000 population becoming smaller each year.

In which occupational areas was the accelerating growth of Vocational Education most evident?

Part 2
Tables
46-53

Among the eight occupational service areas for which the U.S. Office of Education continues to collect data, office occupations had the largest net growth in 1974-75. Trade and industry was second, and consumer and homemaking third. These are also the three areas with greatest total enrollments, although in reverse order. The fourth area in total enrollment is agriculture, which had a net growth of less than one-fourth of each of the others.

The highest growth rate in 1974-75 was in health occupations, which has shown consistently strong expansion for several years. Technical programs were a strong second, with the others clustered at or below the average of just under seven percent. Occupational home economics had a net loss from the year before.



	Enrollment 1974-75	Growth Since 1973-74	Percent of Change
U.S. Total	15,332,447	1,820,387	13.47
Total in Occupational Areas[2]	12,730,577	744,891	6.21
Agriculture	1,012,507	36,884	3.78
Distributive Education	874,170	40,738	4.89
Health	616,547	110,650	21.87
Consumer & Homemaking	3,362,716	159,955	4.99
Occupational Home Economics	462,398	-33,580	-6.77

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[2] Totals in occupational areas do not agree with total reported enrollments for two reasons: (1) They include some students more than once if they are enrolled in more than one area; and (2) They do not include students enrolled in special programs such as industrial arts, career education, and group guidance.

- continued -

	Enrollment 1974-75	Growth Since 1973-74	Percent of Change
Office Occupations	2,950,114	192,474	6.98
Technical	447,075	53,890	13.71
Trade & Industry	3,005,050	183,880	6.52

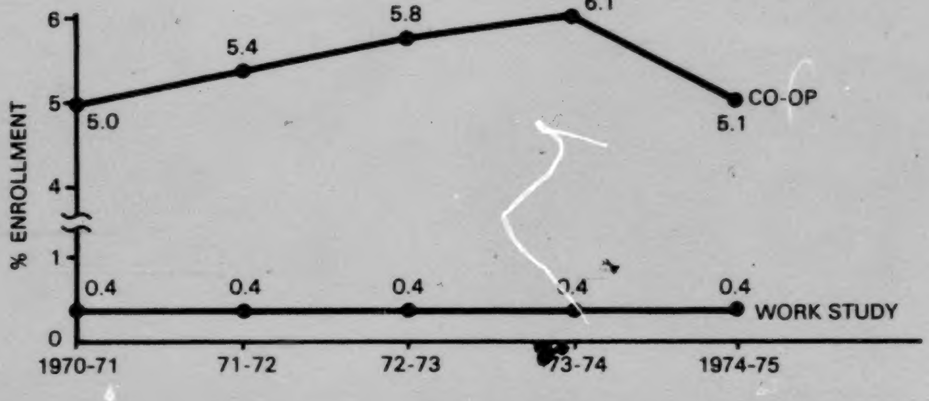
Have cooperative and work study enrollments experienced the same accelerated growth as Vocational Education as a whole?

Part 2
Tables
57, 58

In one sense they have, over the five-year period. But actually the situation represents one of Vocational Education's poorest records of performance if it was the intent of Congress that these programs were to receive special emphasis. Five years of expansion have seen the total Vocational Education enrollment increase by nearly five million students. Cooperative enrollment grew by only 200,727. Work study was even worse -- 19,735 more students in 1974-75 than in 1970-71.[3] In 1974-75 there was an actual decline of 24,638 enrollments in cooperative programs compared with the year before. This includes what are known as both Part B and Part G cooperative programs.

As a percent of total secondary and post-secondary vocational enrollments there was a slight increase in five years from 5.0 to 5.1 for

CO-OP AND WORK STUDY AS PERCENTAGES OF TOTAL SECONDARY AND POST-SECONDARY ENROLLMENT



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[3] These figures are based on total secondary and post-secondary enrollments of 7,603,490 in 1970-71 and 11,308,806 in 1974-75, applying the percentages from Tables 57 and 58 in part 2 of the current report.

cooperative programs and virtually no change for work study -- from 0.3 to 0.4. In one sense this represents growth, because these are percentages of totals and the totals have increased. But considering how low they are and the snail's pace at which they have been growing for at least five years, a different conclusion is inescapable -- neither cooperative work experience nor work study is receiving more than passing attention from vocational educators, and especially from decision-makers.

In the case of work study this is not difficult to understand. Such programs are available primarily to help students attend school, and the work need not be related to their training. Funds have been severely restricted, and most vocational educators have had few if any opportunities to see if the program is of any particular value.

Cooperative work experience is another matter. It also requires additional funds and it requires special effort, especially for instructional personnel who must develop agreements with employers and coordinate student employment within each student's educational program. It often makes class scheduling difficult and requires adjustments on the part of both vocational and non-vocational students and faculty.

But cooperative programs are widely recognized as one of the most effective learning experiences in any kind of education. They would seem almost indispensible in Vocational Education. Either there is a problem not being recognized, or it is being overlooked in the press of other matters, or it is not all that important. Someone needs to find out.

Percentages of Total Secondary and Post-secondary
Vocational Education Enrollments

	Cooperative Voc. Ed. Enrollment	Percent	Work Study Voc. Ed. Enrollment	Percent
1970-71	379,414	5.0	28,893	0.4
1971-72	459,253	5.4	31,409	0.4
1972-73	507,970	5.8	33,922	0.4
1973-74	605,690	6.1	43,905	0.4
1974-75	580,141	5.1	48,627	0.4

Part 2
Table 15

Were there any noticeable changes in secondary and post-secondary cooperative education enrollment within occupational areas?

No. As in previous years, the percent of cooperative education students who were enrolled in each occupational area remained substantially unchanged in 1974-75. While the total declined from 1973-74, three areas reported small increases in the number of co-op students -- agriculture, distributive education, and occupational home economics. The others had lower cooperative enrollments than in the preceding year. In only one occupational area does cooperative experience constitute a significant part of the program -- distributive education, in which 22.9 percent of all enrollments are co-op students. The others range downward from 7.1 percent in occupational home economics to 2.0 percent in technical programs and 0.04 percent in consumer and homemaking.

	Cooperative Education Enrollment		Percent of Total Cooperative Ed. Enrollment		Percent of Total Voc. Ed. Enroll. by Occup. Area
	1973-74	1974-75	1973-74	1974-75	1974-75
U.S. Total	605,298	580,819	100.0	100.0	
Agriculture	34,387	37,582	6.1	6.5	3.7
Distributive Ed.	194,158	199,948	34.0	34.4	22.9
Health[4]	30,500	26,773	4.2	4.6	4.3
Occ. Home Economics	28,453	32,605	5.5	5.6	7.1
Office Education	126,656	113,246	20.8	19.5	3.8
Technical Education	10,052	8,830	1.5	1.5	2.0
Trade & Industrial	154,849	139,750	22.8	24.1	4.7
Consumer & Homemaking	3,053	1,323	1.0	0.2	0.04
Other	23,190	20,762	4.6	3.6	--

What is happening to the membership in vocational youth organizations?

Part 2
Table 8

It is remaining fairly constant at about nine percent of the total Vocational Education enrollment. In 1973-74 data were available from only forty-two States,[5] and these had a membership of 1,238,475. The same forty-two States reported membership in 1974-75 of 1,287,356, an increase of 4.0 percent. Growth was most evident in the office-related organizations, Office Education Association (OEA) and Future Business Leaders of America (FBLA) -- 32.7 and 17.8 percent respectively. This continues a pattern noticed the year before and also reflects a greater net growth of enrollment in this occupational area. The older and larger groups not only failed to maintain growth rates equal to total enrollment, but two of them had net decreases.

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[4] Enrollment in the health occupations decreased, but as a percent of the total it increased because other enrollments also decreased by greater proportions.

[5] The figures in the FY 1974 Baseline report were incorrectly identified as representing forty-three States, although ten States were listed as being omitted. The correct number was forty-two. All fifty States, the District of Columbia and Puerto Rico reported memberships in FY 1975, but for comparison only the same forty-two reporting in FY 1974 were used.

	1973-74 Membership	1974-75 Membership	Percent of Growth	Enrollment in Occupational Area	1974-75 Membership as Percent of Enrollment in Occupational Area
TOTAL (forty-two States)	1,238,475	1,287,356	4.0	9,012,918[6]	14.9
Future Farmers of America (FFA)	415,127	430,954	4.0	882,977	48.9
Future Homemakers of America/Home Economics Related Occupations (FHA/HERO)	411,127	410,999	-0.03	2,992,659	13.7
Distributive Education Clubs of America (DECA)	132,257	127,905	-3.1	684,412	19.7
Future Business Leaders of America (FBLA)	86,215	101,573	17.8	2,115,200	7.0
Office Education Association (OEA)	34,800	46,183	32.7		
Vocational Industrial Clubs of America (VICA)	158,949	169,742	6.8	2,337,670	7.3

Part 2
Table 6

What percent of all secondary school students were enrolled in Vocational Education in 1974-75?

In forty-one States from which data could be obtained it was 50.2 percent. This was almost exactly what it had been in forty-three States the year before. Previously, as noted in last year's Baseline report, it had remained fairly constant at around forty percent. Current figures as well as last year's figures include a number of pre-vocational and career education students in some States, but these have been excluded wherever they can be identified.

Last year it was suggested that the jump from forty to fifty percent may have been due in part to the economic recession which made employment difficult to obtain for graduates without job skills. This may have held true also in 1974-75. It is also possible, even probable, that the idea of obtaining job skills in high school, along with other programs, is gaining in popularity.

The question remains and should be examined: To what extent does current enrollment approach maximum utilization of existing facilities? Do limitations of space, equipment, and vocational teachers act as constraints in preventing sixty percent, seventy percent, or eighty percent of all high school students from being provided with Vocational Education?

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[6] Does not include enrollments in health, technical education, and special programs.

Total Public School Enrollment Grades 9-12 (forty-one States)	11,704,906
Secondary Vocational Education Enrollment Grades 9-12 (same forty-one States)	5,880,181
Percent of Total Secondary Enrollment	50.2

These figures for the most part do not include enrollments in industrial arts or general business programs, many of which are also preparing high school students for skilled employment whatever their stated purpose. Vocational Education in the broader sense thus included well more than half of all high school students in the United States in 1974-75.

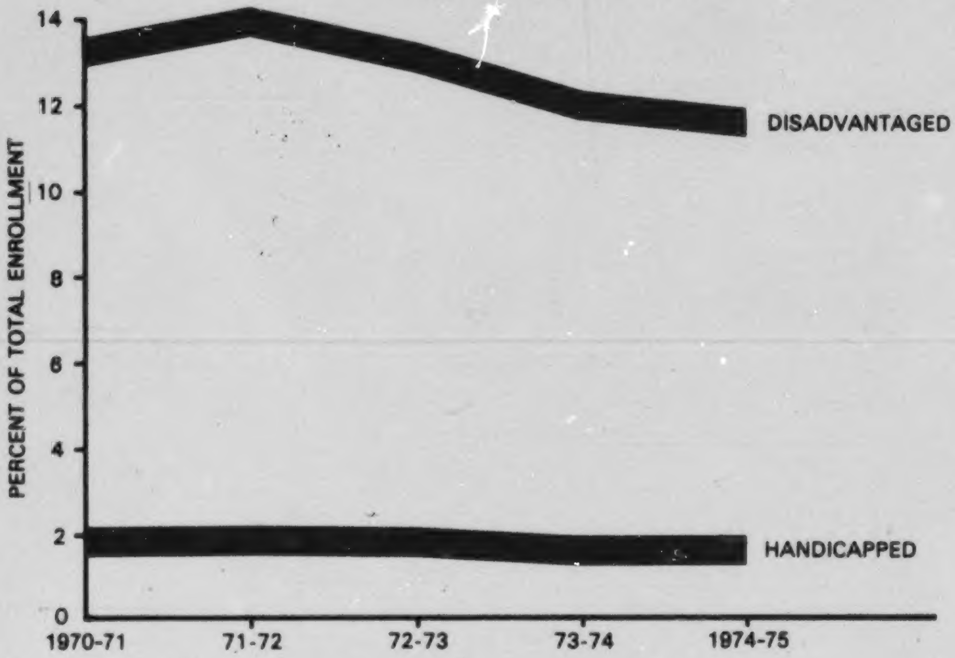
Has there been any increase in the proportionate numbers of disadvantaged and handicapped receiving Vocational Education?

Part 2
Tables
10-13,
54-56

None that is evident. The actual numbers of those served were again up by relatively small amounts, but the percentages of disadvantaged and handicapped in the total Vocational Education enrollment continued to go down.

There are still serious definition problems with these groups, especially disadvantaged, and it may be that substantially greater numbers than those reported are actually enrolled and counted as regular students. This is known to be true in some States, especially in rural areas. The figures here are simply those reported under guidelines laid down by the U.S. Office of Education. And on this basis the record is extremely disappointing. Disadvantaged and handicapped students are two of the principal target groups that Congress intended to benefit through Federal legislation.

PERCENTAGES OF DISADVANTAGED AND HANDICAPPED STUDENTS IN VOCATIONAL EDUCATION

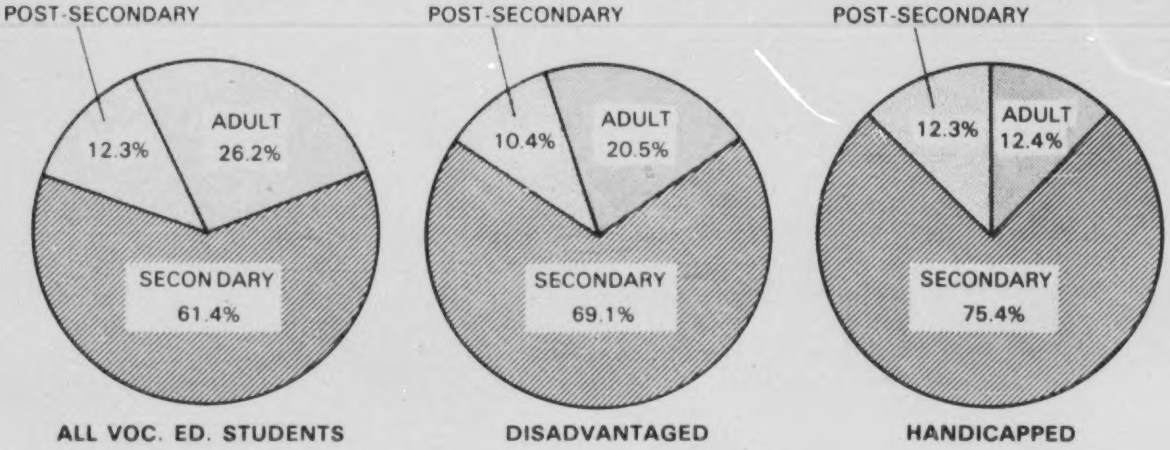


	1972-73	1973-74	1974-75
Reported Enrollment of Disadvantaged Students in Vocational Education	1,581,025	1,631,922	1,799,977
Percent of Disadvantaged Students in Total Vocational Education Enrollment	13.1	12.1	11.6
Reported Enrollment of Handicapped Students in Vocational Education	222,713	235,569	266,744
Percent of Handicapped Students in Total Vocational Education Enrollment	1.9	1.7	1.7

Has there been any change in the enrollment of disadvantaged and handicapped by level of instruction?

Yes, but not much. Last year Baseline reported a shift in the percentage of both groups at two levels -- up at the secondary, and down at adult. This year the figures for 1974-75 show a reversal of that shift. All of these percentages are fairly close to those for total Vocational Education enrollments, although somewhat higher at the secondary level and somewhat lower at the adult level.

1974-75 PERCENTAGES OF DISADVANTAGED AND HANDICAPPED BY LEVEL



In what occupational areas are the disadvantaged and handicapped enrolled?

Office occupations led for the disadvantaged in twelve States from which data could be obtained, followed by occupational home economics, trade and industry, and consumer and homemaking in that order. Trade and industry enrolled the largest number of handicapped, followed by consumer and homemaking, office occupations, and agriculture.

These data are in no sense representative, coming from only twelve States, but they do suggest what may be a similar pattern elsewhere. The four leading occupational areas in which disadvantaged students are enrolled account for four out of five of such students. Three of the same areas -- trade and industry, consumer and homemaking, and office occupations -- enroll two-thirds of all handicapped students in Vocational Education. Without knowing the particular programs in these areas in which most of the disadvantaged and handicapped are enrolled, it is possible to suspect they are headed for low or non-salaried careers.

Disadvantaged and Handicapped Students by Occupational Service Area in Twelve States[7]

	Total Enrollment	Disadvantaged	Percent of Total	Handicapped	Percent of Total
TOTAL	3,224,521	284,010	8.81	54,186	1.66
Agriculture	268,630	16,269	6.06	7,126	2.65
Distributive Education	253,804	21,755	8.57	2,524	0.99
Health	182,998	10,362	5.66	1,730	0.95
Consumer & Homemaking	769,005	47,362	6.16	11,918	1.55
Occupational Home Ec.	94,170	59,505	63.19	6,757	7.18
Office	765,144	63,455	8.29	9,905	1.29
Technical	109,176	6,204	5.68	1,085	0.99
Trade & Industry	781,594	59,098	7.56	13,141	1.68

Part 2
Table 74,
77-85

How do women compare with men in Vocational Education enrollments?

Females outnumbered men by three percentage points, for whatever the data are worth in forty-five States from which they were available. The requirement to report occupational enrollments by sex was restored in 1974-75 after being dropped for two years. The results are less than satisfactory and must be viewed with considerable caution. Seven States were unable to supply complete data, and in some cases couldn't supply any. In most of the States from which data have been obtained they were developed outside the regular reporting system, because not enough time was allowed to change the procedures. Changes in U.S. reporting requirements take at least one working year, and sometimes two or even three, from the time the States are notified until most of them can get the new data flowing through their informational pipelines. Most of the data shown here are thus estimates rather than actual enrollments.

Data From Forty-Five States

	1974-75 Enrollment	Percent
Total	12,405,087	100.0
Male	5,997,278	48.4
Female	6,407,809	51.7

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[7] Arkansas, California, Hawaii, Iowa, Maine, Mississippi, Nebraska, Ohio, Oklahoma, Oregon, Vermont (handicapped only), West Virginia.

Broken down into occupational groups, these figures do show some interesting developments. Consumer and homemaking, as expected, enrolled by far the largest number of females, and office occupations a substantial second. But fifteen percent of the total enrollment in consumer and homemaking was males. There were more males, in fact, in consumer and homemaking, than in distributive education, where they made up fifty-three percent of the enrollment.

The four female occupational areas were consumer and homemaking, office occupations, health occupations and occupational home economics -- each with three-fourths or more of female enrollees. One other, distributive education, was nearly half female. But while the others -- agriculture, technical education, and trade and industry -- had relatively low percentages of females enrolled, the numbers were significant. In trade and industry, the number was 282,993 -- more than in occupational home economics and not far behind both distributive education and health occupations. Nearly ten percent of the agriculture enrollment were females, a total of 76,854. Technical education is probably the most disappointing area on the list as far as females are concerned, because, unlike many of the agricultural and trade and industry programs, physical requirements are virtually no problem. And usually the highest paying jobs for which Vocational Education prepares students are to be found in the technical fields.

A particularly interesting observation appears in the male enrollments. Agriculture, trade and industry, and technical education are occupational areas dominated by males, with more than eighty percent of the enrollment in each. But in none of the others is the percentage less than fifteen. Health occupations report 21.7 percent and office occupations 26.5 percent male enrollment. This suggests that sex barriers are being broken down more readily for males -- or by males -- than in the case of females.

Special programs (group guidance, pre-post-secondary, remedial, industrial arts, volunteer fireman, and others) were also reported by total male and female enrollment in 1974-75, and the results are somewhat of a mystery. Males make up nearly two-thirds of the enrollment. The reason might be assumed to be the industrial arts enrollment, but the number in that category was only 368,101 out of a total of 3,331,716. The bulk of special education students were in group guidance -- 2,271,889 -- which is pre-vocational career education. Why should there be substantially more boys than girls in group guidance?

	Males		Females	
	Enrollment	Percent	Enrollment	Percent
Agriculture	737,573	90.6	76,854	9.4
Distributive Education	331,598	53.0	294,237	47.0
Health Occupations	100,250	21.7	361,262	78.3
Consumer & Homemaking	433,383	15.7	2,333,099	84.3

- continued -	Males		Females	
	Enrollment	Percent	Enrollment	Percent
Occupational Home Ec.	48,435	16.9	238,177	83.1
Office Occupations	513,874	26.5	1,426,948	73.5
Technical Education	274,608	88.3	36,229	11.7
Trade & Industry	1,824,748	86.6	282,993	13.4
Special Programs	1,444,324	61.6	713,726	38.4

Part 2
Table 75

How well is Vocational Education serving the ethnic minority groups?

On the sole basis of numbers enrolled, probably a little better than the rest of the population. Actually, no one knows. Blacks make up a little more than ten percent of the Nation's population, and fifteen percent of the Vocational Education enrollment. Nearly six percent of all vocational students are Hispanic, which is probably higher than the percent of Hispanic people in the total population. The U.S. Census has no separate Hispanic figures. American Indians and Orientals are small minorities, and both are better represented in Vocational Education than in the total population. It would be extremely valuable, if not essential, to know what programs these minority groups are enrolled in to say with any assurance how well they are being served.

As it is, all of them appear to have slipped a little in proportion to Vocational Education enrollments over a three-year period. The last previous year in which ethnic data were required by the U.S. Office of Education was 1971-72. At that time the enrollment of Blacks was 16.1 percent of the Vocational Education total, compared to 15.1 percent in 1974-75. Hispanic enrollments made up 6.1 percent in 1971-72, compared to 5.7 three years later. American Indians dropped slightly at 0.8 percent. Only Orientals increased their percentage from 1.0 to 1.1.

	Percent in Total Population[8]	Percent in Vocational Education 1971-72[9]	Percent in Vocational Education 1974-75
Blacks	11.1	16.6	15.1
American Indians	0.4	0.8	0.8
Orientals	0.5	1.0	1.1
Hispanic	Not Available[10]	6.1	5.7

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[8] Population by ethnic group has not been updated by the U.S. Census Bureau since 1970. The total population has increased an estimated six percent, and the figures here simply represent the same increase applied to each.

[9] These percentages are taken from Tables 41-47 in Vol. 2 of the Baseline reports, pp. 96-105.

[10] The 1970 U.S. Census does not contain a breakout of Hispanic or Spanish-surnamed.

Expenditures

Did reported Vocational Education expenditures continue to increase in 1974-75 as they had in previous years?

Part 2
Table 64

No, not at the same rate. Total reported Federal, State and local expenditures did go up again but by the lowest percentage since 1971-72.[11] Inflation was down only slightly, resulting in an increase of real support by less than three percent. This is by far the lowest net gain since Project Baseline began compiling data. Last year it was noted that the rate of increase was sluggish, only a little ahead of inflation, for the years 1971 through 1974. In 1975 the rate of increase was approaching zero.

Fiscal Year	Inflation Rate[12]	Cost of Living Index (1970-71 = 100)	Expenditures[13]		Year to Year Percentage Change In Expenditures	
			Nominal	Real	Nominal	Real
1970-71	-	100	$2,399,025,016	$2,399,025,016	-	-
1971-72	4.3 %	104.30	2,657,548,731	2,547,985,360	10.8 %	6.2 %
1972-73	3.3	107.74	3,030,657,492	2,812,936,228	14.0	10.4
1973-74	11.0	119.56	3,590,866,606	3,003,401,310	18.5	6.8
1974-75	9.2	130.56	4,032,668,579	3,091,579,822	12.4	2.9

What has been the effect of inflation on Vocational Education expenditures since 1963?

Part 2
Table 73

Buying power is now less than half what it was thirteen years ago for the same amount of money. Annual appropriations have increased even more, but the increases too often are thought of as actual increases. They are not. If the dollar in FY 1975 had had the same value it did in 1963, the Vocational Education expenditures that year would have purchased

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[11] Reported expenditures are lower than actual expenditures, because many States report only partial indirect costs and some report none at all. The difference is not known. Changes from one year to the next may be fairly reliable since the basis for reporting usually remains the same.

[12] Inflation rate taken from Wharton, BFA 1975 August 11, 1976. The source cited in Baseline Vol. III was the Federal Reserve Bulletin, but the Federal Reserve Bulletin gets its figures from Wharton.

[13] Expenditure data updated since publication of Vol. III, Baseline report.

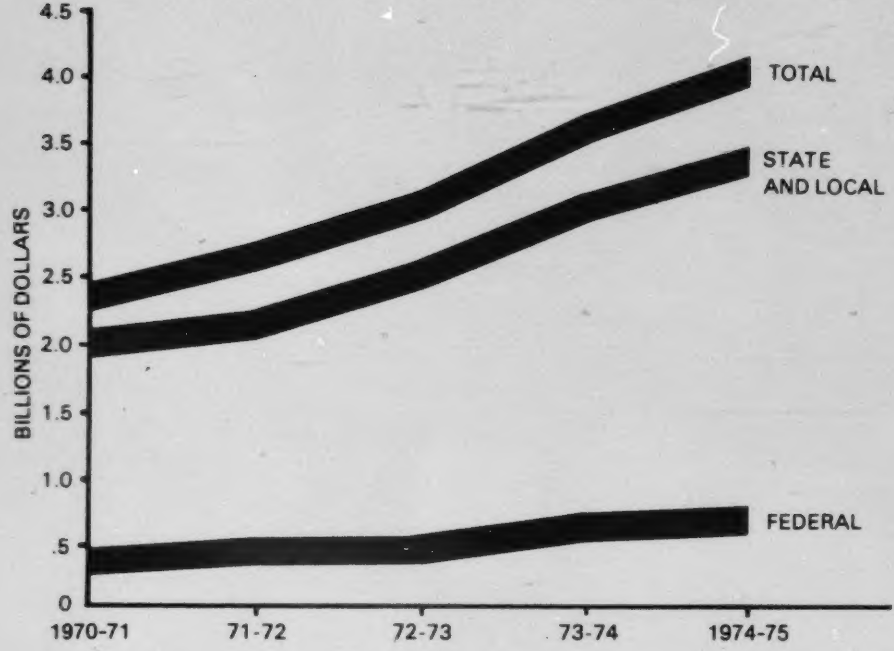
$17 million more skill training for youth and adults.[14] Increasing Vocational Education budgets each year will not mean an increase in services if the annual increment is allowed to become too small. This is a particularly critical point to keep in mind at a time when new inflationary pressures are being felt.

Part 2
Table 65

Was the financial lag most evident at the Federal level or at the State and local level in FY 1975?

It's at the Federal level. State and local expenditures increased by thirteen percent in FY 1975 over the preceding year, while Federal expenditures increased only six percent. The small net increase after allowing for inflation was therefore contributed entirely by the States and local schools. The ratio of State and local expenditures to Federal expenditures continues inching upward. It reached 5.9:1 in FY 1975.

VOCATIONAL EDUCATION EXPENDITURES



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[14] Based on extending to 1975 the impact of expenditures table in Learning a Living Across the Nation, Vol. IV, Part 2, p. 42.

State and local expenditures increased in forty-one States and decreased in eleven. Federal expenditures increased in only thirty-four States, and decreased in eighteen. Individual State expenditures varied widely from a total increase of 159 percent in one and 122 percent in another to a decrease in nine States. One State reported a drop of fifty-one percent in Vocational Education expenditures, but it had an increase of ninety-four percent two years earlier. Four States have reported net decreases over the past four years. Thirteen States have reported increases during the same period of more than 100 percent, five of them more than 200 percent, and two of them more than 300 percent.

	FY 1974	FY 1975	Increase	Percent of Increase
State and Local Reported Expenditures	$3,040,944,316	$3,448,478,533	$407,534,217	13.4
Federal Expenditure	$ 549,922,290	$ 584,250,046[15]	$ 47,705,423	6.2
Ratio of State and Local to Federal Expenditures	5.5:1	5.9:1		

What is happening to the reported cost per student in Vocational Education?

Part 2
Table 69

It is going down. With enrollment growth exceeding expenditure growth, this is the natural result. It was evident at all levels in 1974-75, but especially for post-secondary students. In the preceding year, Vocational Education cost per student had increased for adults while dropping a little for secondary and post-secondary students. This year secondary and adult showed a minimal increase but post-secondary continued to drop.

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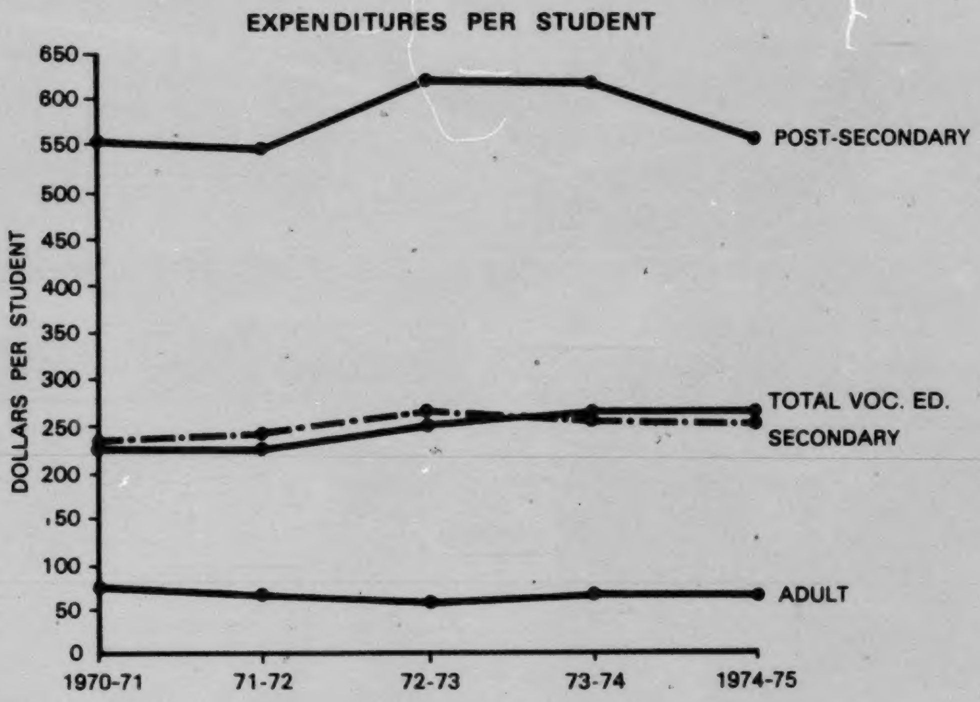
[15] This is an inflated figure, but it is the best that can be determined following a change in Federal reporting requirements. It includes funds carried over from the preceding year and spent in FY 1975, which in some States include State and local as well as Federal carryover. There is no way to separate them in the totals. Based on previous experience, it is assumed that carryover funds are primarily Federal.



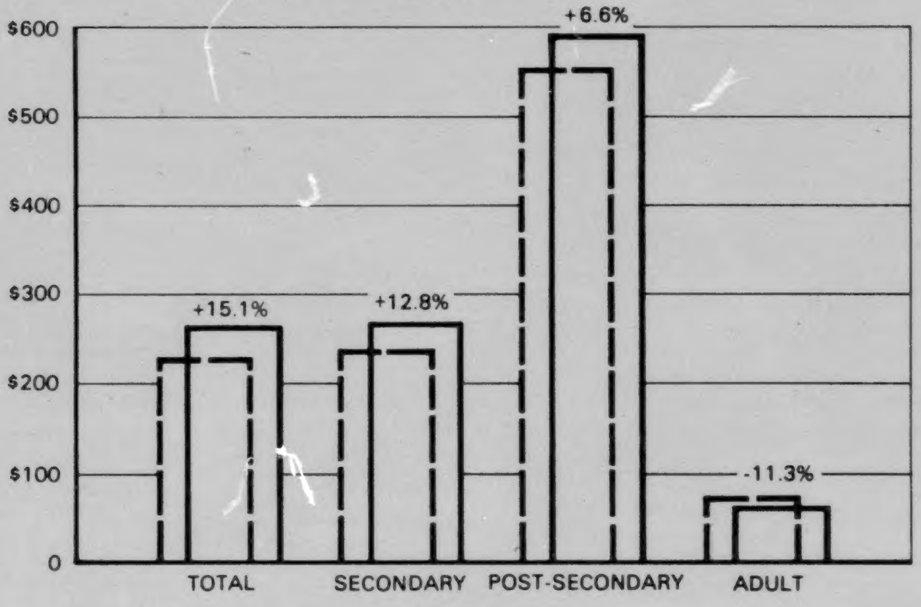
	FY 1975
Total Expenditures Reported per Student in Voc. Ed.	$263.26
Expenditures Reported per Secondary Voc. Ed. Student	$257.94
Expenditures Reported per Post-Secondary Voc. Ed. Student	$557.65
Expenditures Reported per Adult Voc. Ed. Student	$ 63.40

One reason for the difference in per-student costs at different levels, as noted in previous Baseline reports, is a difference in contact hours. Post-secondary students apparently average more time in their programs during a twelve month year than secondary students, and secondary students more than adults. Another reason is the cost of facilities and equipment, which is usually higher at the post-secondary level and often considerably higher due to the nature of the programs. Many States have been making heavy investments as additional community colleges are established, and such expenditures are usually reported when they are made, not spread out over a number of years.

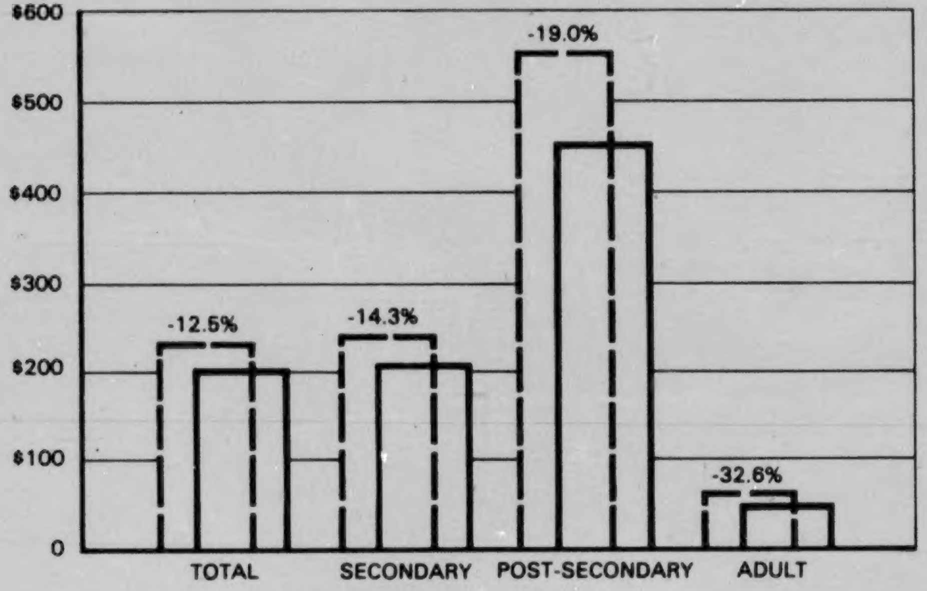
The relatively low cost of adult programs is to some extent due to the fact that they use facilities and equipment in secondary and post-secondary institutions. Adult programs also use secondary and post-secondary faculty who teach in the evening for less than their full-time salaries. These are strong economic arguments, of course, for expanding adult programs in Vocational Education in every way possible as long as there are adults who need training for employment and for improving their performance on the job.

If cost per student is examined in "real" dollars instead of inflated dollars, there has been a sizeable decline since 1971. If program quality has not been lowered, and there is no reason to believe it has, then this represents a Vocational Education achievement that is not often recognized. Such a reduction has its limits, of course, and cannot be expected to go on too long before something will have to give -- program quality, special services for students who need them, adequate program selection, vocational guidance and counseling, program development, or any of the expenditures that attempt to carry out the Congressional purpose of making available to all persons training "which is of high quality."

PER STUDENT EXPENDITURES ON VOCATIONAL EDUCATION
IN "CURRENT" DOLLARS: 1971 VS. 1975



PER STUDENT EXPENDITURES ON VOCATIONAL EDUCATION IN "REAL" DOLLARS: 1971 VS. 1975

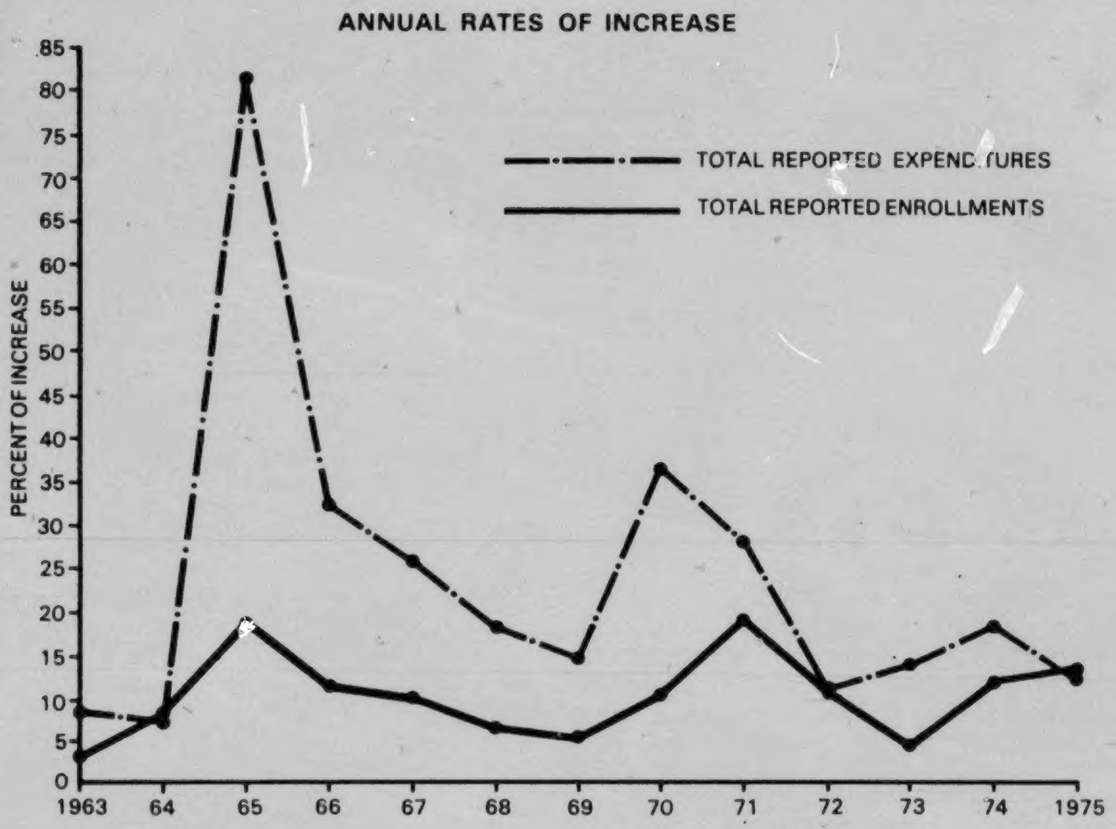


Total expenditures reported per student at all levels continued to vary considerably among the States. Part of the reason is that costs vary from State to State, but most of the reason is the way enrollment reports differ. Illinois had the lowest total cost per Vocational Education student in FY 1975 at $112.09, and Arizona was next at $126.06. Both of these States count career education students below grade nine and students in special programs as Vocational Education students. On the other hand Massachusetts, Tennessee, Rhode Island, and Pennsylvania, which count students only if they are enrolled in regular Vocational Education programs, reported costs per student of $935.43, $668.28, $557.35, and $557.07, respectively.

Part 2
Tables 38,
64

Is there a relationship between the annual growth of Vocational Education and annual expenditures?

Yes. This has been difficult to determine, because each year there has been a variation in the difference between the two growth rates. Some years the growth rate of one has gone up while the other went down, as was the case in FY 1975. The growth rate of expenditures dropped to 12.3 from 18.5 the preceding year, the rate of student enrollment expansion increased from 12.0 to 13.5. This has happened five times since FY 1963. Nevertheless, in the thirteen years between FY 1963 and FY 1975 a pattern is clearly evident.



The more active line on the graph is the change rate of spending. It tends to pull the change rate of enrollment up or let it decline. Only twice in thirteen years have enrollments grown faster than expenditures. The lower rate of expenditure growth in FY 1975 may have had a dampening effect on enrollment growth, which may decline further if expenditures are not substantially increased. It must be recognized, of course, that this is an extremely over-simplified observation. It does not take into account the possibility of increasing efficiency in the use of funds as classes and programs get larger. It ignores the quality of programs offered, and the kinds of programs offered. All of these are variables, and there are others also, which affect the size of enrollments in relation to expenditures. Nevertheless, it cannot be denied that when appropriations for Vocational Education are increased, enrollments are likely to increase, and when they go down, enrollments are likely to go down.

Is anything happening to change the pattern of relatively low expenditures for the disadvantaged and handicapped in Vocational Education?

Part 2
Tables 28,
29, 70, 71

No. Both increased a little in FY 1975, but as percentages of total

Vocational Education spending, disadvantaged was lower than it had been in FY 1972 and handicapped was almost the same as for that year. As Baseline has repeatedly pointed out in previous years, this may be to some extent a definition problem. Disadvantaged and handicapped students who are not receiving special services are counted as regular students, and no one knows how many of these are enrolled in regular Vocational Education classes.

On the other hand, no one knows how many more disadvantaged and handicapped students could be enrolled in Vocational Education if they had special assistance that they are not getting. Also, disadvantaged and handicapped students may have more difficulty in getting employment when they complete their training even with special assistance, and employment is the final test of success in Vocational Education. How many vocational educators can normally be expected to spend heavily for disadvantaged and handicapped students when their evaluation depends on successful placement?

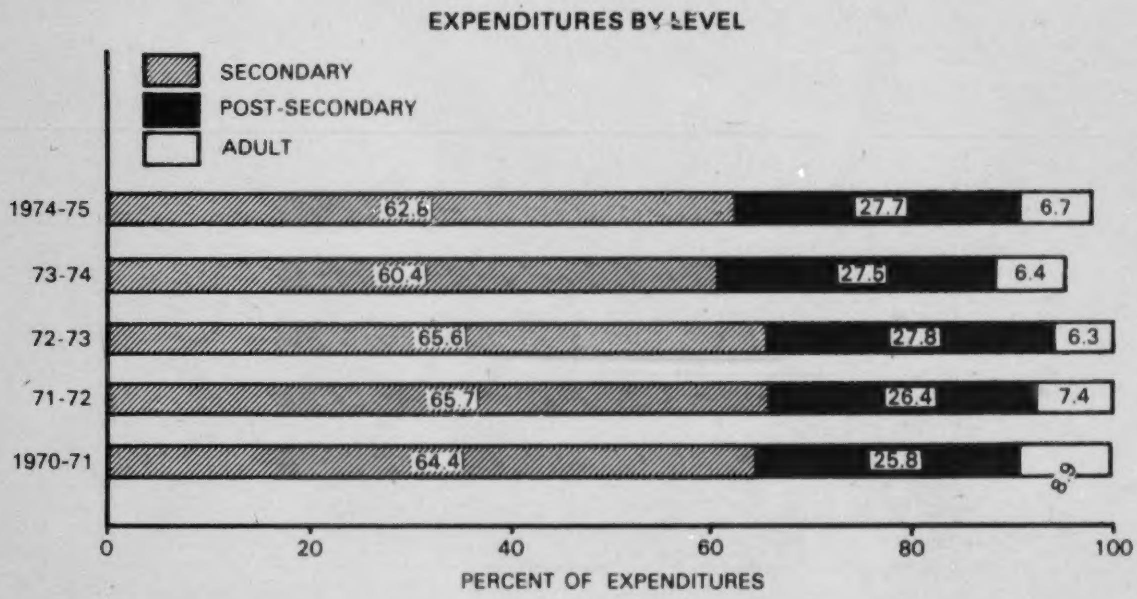
The problem is obviously more complicated than simply spending more money or enrolling more of these students. No one can question as national policy the intent of Congress to make Vocational Education more readily available to the disadvantaged and handicapped. More responsible leadership by vocational educators and administrators at the Federal, State, and local levels will be required to work out the difficulties and get on with the job of making national policy in this case a reality.

	FY 1971	FY 1972	FY 1973	FY 1974	FY 1975
Total Expenditures for Disadvantaged Students in Vocational Education	$229,346,792	$286,786,154	$318,694,933	$309,475,336	$363,983,558
Percent of Total Vocational Education Expenditures	9.6	10.8	10.5	8.7	9.0
Total Expenditures for Handicapped Students in Vocational Education	$ 62,374,650	$ 66,138,395	$ 94,150,830	$ 83,040,479	$102,577,706
Percent of Total Vocational Education Expenditures	2.6	2.5	3.1	2.4	2.5

What is happening to the relative emphasis on secondary, post-secondary, and adult Vocational Education as shown by expenditures at each level?

Part 2
Tables
66-68

Nothing. In 1973-74, secondary expenditures dropped from sixty-five to sixty percent of the total, but in 1974-75 they were back up to sixty-two percent. They have remained between sixty and sixty-five percent since Project Baseline began collecting data five years ago. Similarly, post-secondary expenditures, which barely changed at all as a percent of the total in 1974-75, have stayed around twenty-six to twenty-eight percent of the total for five years. Adult expenditures have dropped slightly during that five-year period in proportion to the others, from nine percent to 6.5 percent. In 1974-75 they increased their share by 0.3 of a percentage point.



	FY 1973	FY 1974	FY 1975
Total Vocational Education Expenditures	$3,030,657,492	$3,590,866,606	$4,032,668,579
Total Vocational Education Expenditures at Secondary Level	$1,988,544,000	$2,167,707,597	$2,531,621,159
Total Vocational Education Expenditures at Post-Secondary Level	$ 842,039,000	$ 987,874,748	$1,116,339,329

- continued -

	FY 1973	FY 1974	FY 1975
Total Vocational Education Expenditures at Adult Level	$ 190,530,000	$ 229,572,618	$ 265,704,424
Expenditures Unreported by Level	$ 9,544,492	$ 205,711,643	$ 119,003,667

There is one aspect of the picture that does not appear in these figures and should be noted. During the past three years there have been substantial numbers of students in special programs -- the pre-vocational (career education), industrial arts, remedial, etc., discussed earlier -- 3½ million in 1974-75, and most of these are identified at the secondary level. That would suggest that the percent of actual secondary Vocational Education students being directly prepared for employment compared to post-secondary and adult is going down. On the other hand, no one knows how many industrial arts students are being trained for jobs and listed under special programs or not counted at all. Moreover, remedial students may be taking shop courses at the same time they are enrolled in basic education programs to improve their reading or math competence. Volunteer fireman, also under special programs, receive training that could qualify them for jobs in regular fire fighting departments. But then again, there are some regular Vocational Education programs preparing students for non-salaried employment.

Recognizing that there are fuzzy edges on both sides, the figures as reported probably represent a fairly reliable breakdown by level. And that breakdown is certainly remaining fixed, regardless of the growth of community colleges or the judgment of critics that it should be changed. In that regard, there are also critics on both sides -- or rather on all three sides. Many vocational educators, administrators, and legislators feel strongly that regardless of what is done at the post-secondary and adult levels, at least eighty percent of high school students should be in Vocational Education. There are equally strong advocates of shifting the whole emphasis in Vocational Education from secondary to post-secondary. And there is a fairly wide concensus that not nearly enough is being done for adults. Perhaps the answer is that all three should be considerably increased, that it is not so much a question of either/or as serving the needs at each level as those needs exist.

Part 2
Table 31

How much of the cost of Vocational Education is for back-up services?

About ten percent as reported at the State and local levels. These are the so-called ancillary costs for administration and supervision, teacher education, research and demonstration, and curriculum development. They went up proportionately more than total costs in 1974-75, which means that a slightly larger share of the Vocational Education dollar was used to provide back-up services and a slightly smaller share for actual instruction. Administration and supervision, a target of criticism by the General Accounting Office in Washington last year, increased more than it had in 1973-74.

	Total Ancillary Costs		Administration and Supervision		
	Cost	% of Total Voc. Ed. Cost	Cost	% of Ancillary Cost	% of Total Voc. Ed. Cost
FY 1973	$280,499,032	9.7	$226,690,842	80.8	7.5
FY 1974	$306,500,012	8.6	$244,299,038	79.7	6.9
FY 1975	$274,486,193	9.3	$304,722,248	81.3	7.6

What this situation means is hard to say. As Project Baseline noted in last year's report, the General Accounting Office failed to take into consideration Congress' mandate to the States and local school districts to bring about sweeping changes, massive updating, and unprecedented expansion of Vocational Education. This takes administrative and professional manpower, and manpower costs money. Whether it should have increased more in 1974-75 than in the preceding year, especially when resources were tightening up, depends on what the money actually bought.

The only light that Federally required statistics are capable of shedding shows that the largest increase and the largest rate of increase was for administration and supervision. Teacher education increased slightly. Research and development under ancillary services also increased slightly, but as a percent of total Vocational Education expenditures it slipped a little. There are other research and development expenditures under Parts C and D of the Federal legislation which are discussed in the next paragraph. Curriculum development shows the only drop, of just 0.1 percent.

	FY 1974	FY 1975
Total Vocational Education Expenditures	$3,590,866,606	$4,032,668,579
Ancillary Services Administration and Supervision	$ 244,299,038	$ 304,722,248
Percent of Total Vocational Education Expenditures	6.8	7.6
Teacher Education	$ 32,205,111	$ 39,402,832
Percent of Total Vocational Education Expenditures	0.9	1.0

- continued -

Research and Demonstration[16]	$ 13,364,985	$ 14,446,325
Percent of Total Vocational Education Expenditures	0.4	0.4
Curriculum Development	$ 16,630,878	$ 15,914,787
Percent of Total Vocational Education Expenditures	0.5	0.4

Part 2
Tables 31,
32, 33

What happened to research and demonstration support in 1974-75?

Altogether it increased but by a relatively small amount. Part C expenditures, the major research funds under the Vocational Education Act, were lower than the year before by twelve percent. Development (demonstration) funds from Part D of the Act increased nearly fifteen percent. Research and demonstration under ancillary funds, as seen before, increased eight percent. At this rate, the total for research and demonstration remained somewhere between 1.5 and 2.0 percent of all Vocational Education expenditures, far short of what Congress had in mind in 1963 and 1968.[17]

Congress, in this case, has been somewhat ambiguous, because both the higher intent and the lower reality are the results of its own actions. It is by no means an unusual practice for Congress to pass a high authorization followed by low annual appropriations, but this situation seems to be unique. Congress established ten percent of Parts B and C as the statutory level of support for research under Part C. Congress then proceded to violate its own statute by making annual appropriations of much less than ten percent.

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[16] These are expenditures by the States which ordinarily would be made under Part B, the basic grants for program operation. Some States, however list their Part C and D expenditures, research and demonstration, as ancillary services. As a result of this kind of confusion, the total amount being spent for Vocational Education research and demonstration is difficult to figure. For a more detailed discussion, see Vol. IV Baseline Report, Part 1, pp. 47-50.

[17] The 1.5 to 2.0 percent figures are based on total national research and demonstration costs in Vocational Education as detailed in Vol. IV of the Baseline report, Part 1., pp. 47-50.

	FY 1973-74	FY 1974-75	Percent of Increase or Decrease
Part C Expenditures	$12,381,995	$10,962,890	-11.46
Part D Expenditures	$17,367,919	$19,922,360	14.71
Total	$29,749,914	$30,885,250	3.82
Research and Demonstration under Ancillary Services[18]	$13,364,985	$14,446,325	8.09

Completions and Placements

What was the impact of Vocational Education on the employment market in 1974-75?

Part 2
Table 59

With unemployment still high, more than a million Vocational Education students from the preceding year were reported to be employed. There was a small increase in the total number who had completed their training or left with job entry skills compared to the year before, but the percent who got jobs increased from 46.9 to 49.7. Not all completers and leavers were available for employment. Many were continuing in school or for personal reasons were not ready to look for a job. But of those who were available, 88.2 percent were reported to be employed. Only 150,000 were known to be unemployed and looking for work, seven percent of the total number of completers, or thirteen percent of the number available for work.

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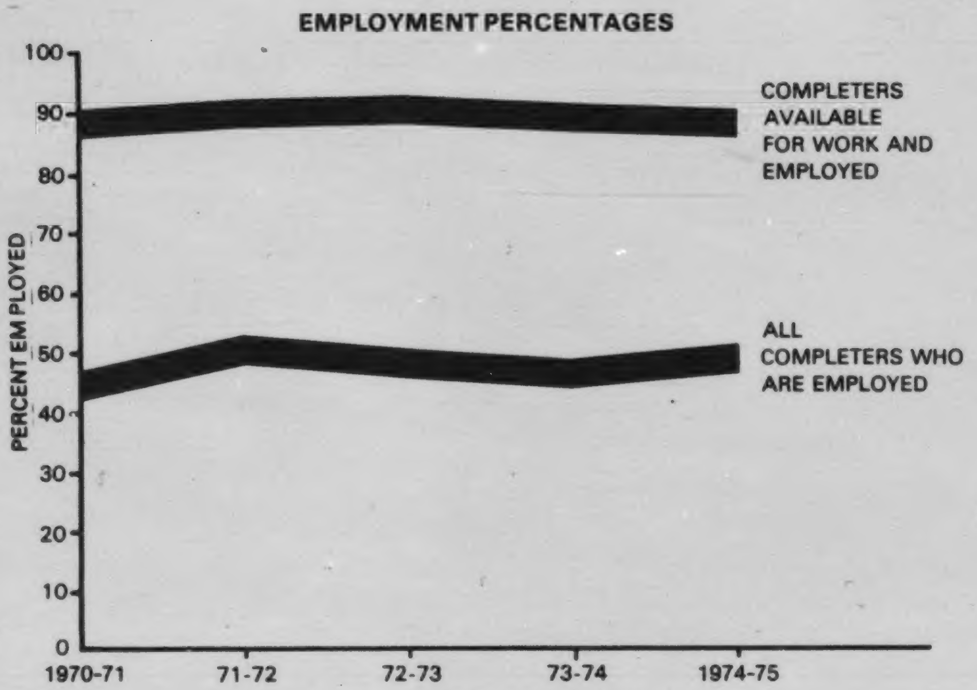
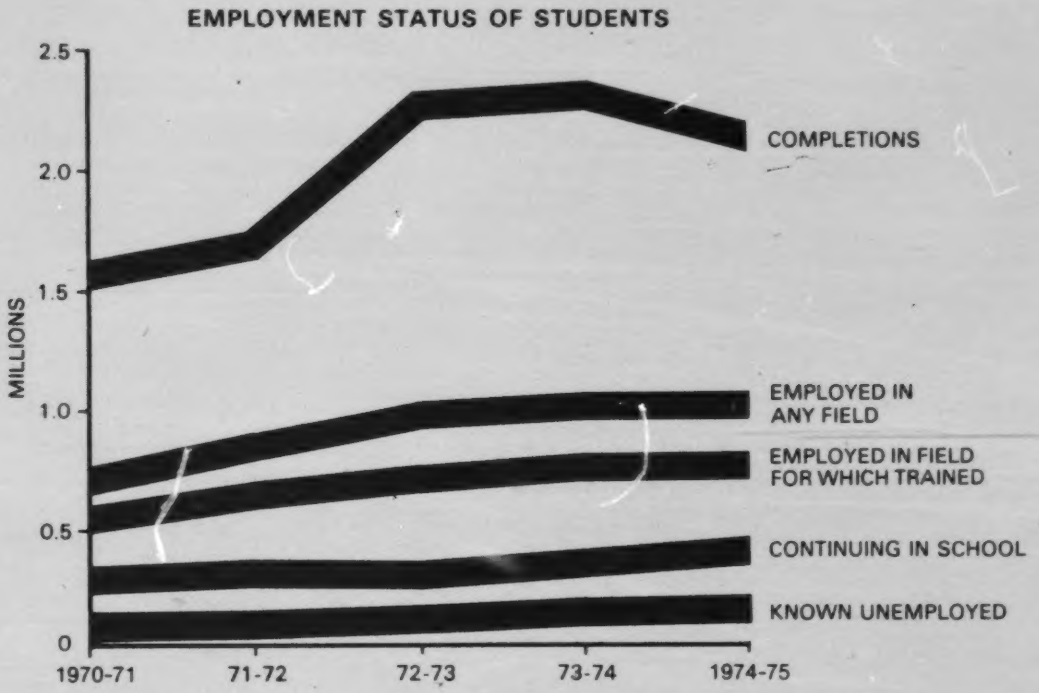
[18] As noted earlier this is a duplication of some of the C and D expenditures above, and it also contains additional expenditures which are not from Part C and D funds. For a more detailed breakdown, see Vol. IV Baseline report, Part 1, pp. 47-50.



	1970-71	1971-72	1972-73	1973-74	1974-75
Completions (Includes early leavers with marketable skills)	1,616,050	1,724,104	2,048,756	2,324,098	2,144,516
Available for full time employment	819,109	968,050	1,094,419	1,214,231	1,208,100
Employed full time in field for which trained	564,506	671,895	727,957	783,564	774,063
Total employed (In related and non-related fields)	728,080	878,408	995,300	1,088,811	1,065,689

These figures seem unrealistic to some observers and questions may be raised about the validity of the data. The Baseline staff was skeptical at first, and admittedly the sources are often biased and unreliable. Most States collect their followup data from teachers, and teachers are suspected of guessing when they don't know and guessing on the side of successful teaching. However, when States have shifted from teacher-supplied data to direct student followup systems, or have changed back, the percentages have not changed a great deal. A few States have made validation studies and their teacher-supplied figures have been shown to be fairly reliable. The State of Kansas by law must have the student followup audited by another agency, and Kansas' employment percentages are higher, not lower, than those of the Nation as a whole. These observations would seem to indicate that any inflationary effect of personal reporting by teachers is reasonably small. It may be balanced by the number of students whose employment status is reported as unknown when in fact they are employed.



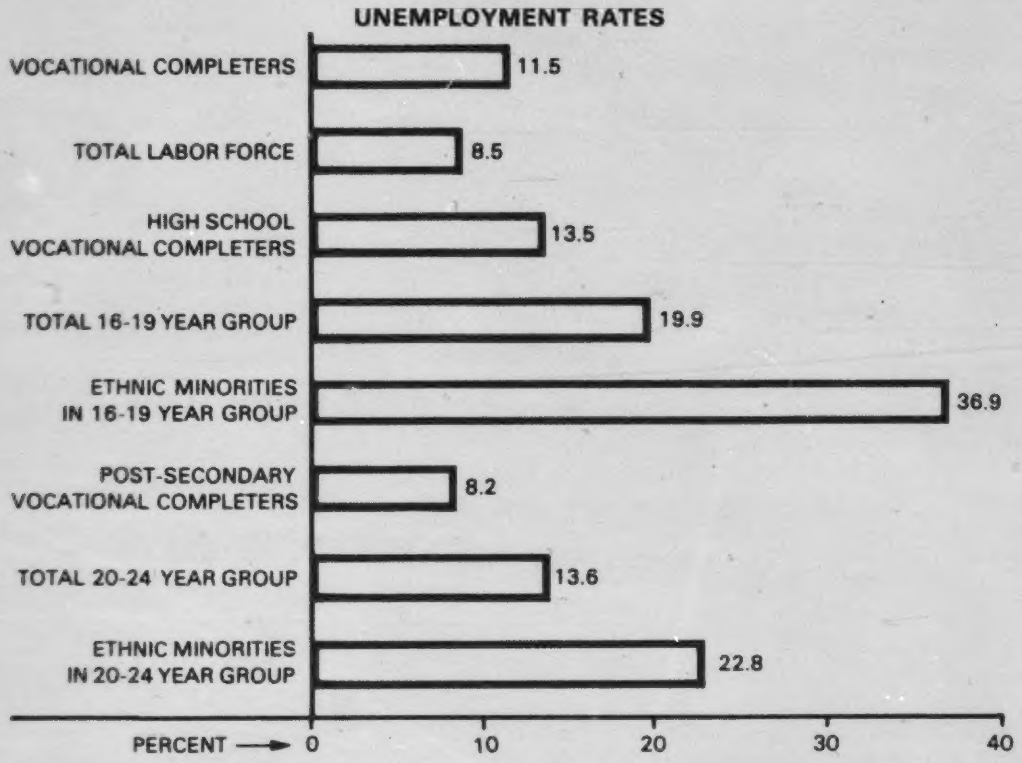
How did the continuing economic recession affect Vocational Education graduates and leavers with job entry skills in 1975?

Very little. The number of those available for work who got jobs either related to their training or unrelated was only about one percentage point below the year before. The recession as indicated by total unemployment was worse. Vocational Education unemployment continued to remain substantially below that of comparable age groups in the total population. The same thing had happened in the preceding recession year of 1973-74. Two years in a row of consistently higher employment rates for Vocational Education students than for those without vocational training in a tight job market cannot be ignored. It is probably one of the reasons for the accelerating national increase in Vocational Education enrollment.

Part 2
Tables
59-61

How does the unemployment rate of students who have had Vocational Education compare with the rest of the population?

In 1975 it continued to rise, but by only a little more than half the national increase. At 11.5 percent it was up 1.4 percentage points, while the national rate was up 2.4 percentage points.[19] In comparing age groups, the unemployment rate of 16-19 year olds was more than six percentage points higher than it was for high school Vocational Education completers. For the 20-24 year age group, total unemployment was 13.6 percent, compared to 8.2 percent for post-secondary Vocational Education completers.[20]



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[19] Vocational Education employment data were reported for February in the year following completion instead of October as in prior years. National unemployment data are also for February 1976.

[20] If vocational student data were compiled on the same basis as the U.S. Department of Labor's statistics vocational student unemployment rates would probably be even lower. The U.S. Labor Department counts persons as employed if they work as little as one hour in the reporting period. Vocational students are counted as employed only if they are employed full time.

It would be highly beneficial to vocational educators and minority groups alike to know the unemployment rate of blacks and other ethnic minorities who have completed vocational programs. In the total population they had unemployment rates at the high school level of thirty-seven percent, and at the post-high school level of twenty-three percent.

	Oct. 1973	Oct. 1974	Feb. 1976
National Unemployment[21]	4.6%	6.0%	8.5%
Unemployment of Blacks and Other Minorities	8.4%	10.9%	13.9%
Unemployment of Vocational Education Completers	9.1%	10.1%	11.5%
Unemployment of all Persons 16-19 Years of Age	14.1%	17.1%	19.9%
Unemployment of Blacks and Other Minorities 16-19 Years of Age	27.2%	34.5%	26.9%
Unemployment of Secondary Vocational Education Completers	10.2%	11.4%	13.5%
Unemployment of All Persons 20-24 Years of Age	7.1%	9.4%	13.6%
Unemployment of Blacks and Other Minorities 20-24 Years of Age	13.9%	16.8%	22.8%
Unemployment of Post-secondary Vocational Education Completers	7.1%	7.8%	8.2%

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[21] Employment and Earning, February 1976. U.S. Department of Labor, Bureau of Labor Statistics. All non-Vocational Education unemployment data come from this source. All are updated as of February 1976, and all except Blacks and other minority data have been seasonally adjusted. The large discrepancies between these data for 1973 and those used in Baseline's Vol. 3 are due to updating, resulting in more accurate figures. The base month, February, is used for current reporting instead of October because of a change in USOE reporting requirements.

How did job placement of Vocational Education students compare at the secondary, post-secondary, and adult preparatory levels in 1975?

In numbers, secondary students still account for almost twice as many as post-secondary and adult combined, but in percentages of placement, post-secondary rank the highest followed by adult, with secondary last. This pattern has remained virtually unchanged for several years, and it is not surprising. The post-secondary and adult programs, especially the latter, have not been developed as widely as the secondary, and students in these programs are nearer the age employers probably want.

A considerable number of high school students continue their education or for other reasons do not want regular employment, which is reflected in only forty-five percent of the completers at this level being employed compared with sixty percent of the post-secondary and fifty-two percent of the adult completers. It is interesting to note, however, the way the gap closes when considering only those available for work who are employed. It is lower for high school students but only by five percentage points compared with post-secondary students, and four percentage points compared with adult students. This suggests that neither the age difference preferred by employers nor the more advanced training at the post-secondary level results in much greater opportunities for employment. Another suggestion would be that while the employment market for post-secondary and adult vocational students is better than for high school students, the difference is not as great as sometimes believed.

	Secondary	P-Secondary	Adult
Completions (Includes early leavers with marketable skills)	1,345,335	515,744	283,437
Employed full time in field for which trained	404,430	253,523	116.110
Total employed (In related and non-related fields)	609,922	308,690	147,077
Percent of completers who are employed	45.3%	59.9%	51.9%
Percent of those available for work who are employed	86.0%	91.9%	90.3%

Part 2
Tables
36, 37, 72

What is happening to the Vocational Education teacher shortage?

It shows some improvement. Last year Project Baseline reported that the number of teachers continued to increase but not enough to keep up with the increasing enrollments. The situation this year swung slightly in the other direction. The total number of teachers reported by the States in 1973-74 had increased nine percent over the previous year while enrollments increased twelve percent. In 1974-75 teachers increased fifteen percent, and enrollments went up 13.5 percent, less than the rate of the teacher increase.

	1971-72	1972-73	1973-74	1974-75	Total Four-Year Increase
Total Vocational Education Teachers (Full and Part-time)	235,315	243,303	265,290	304,858	69,543
Percent of Increase	11.4	3.4	9.0	14.9	44.3
Total Vocational Education Enrollments	11,578,609	12,064,761	13,512,060	15,332,447	3,886,969
Percent of Increase	10.4	4.2	12.0	13.5	46.2

The promise of new teachers on the way improved a little also, but was still short of the accelerating demand. Pre-service training enrollments increased by only 5.6 percent over the preceding year, compared with an increase of almost fourteen percent in the number of students.

The number of teachers receiving in-service training went up 19.5 percent, the brightest spot in the picture of Vocational Education teacher supply and demand. There is little doubt that in-service training must continue to receive attention simply to update and improve the instructional programs. But this in no way takes care of the need to prepare a much larger instructional force.

Secondary teachers increased in 1974-75 by a little more than half the percent of student increase at this level. Post-secondary teachers decreased in 1974-75 by 11.4 percent, while enrollments at this level increased 18.8 percent. Full-time adult teachers also decreased, but only by one percent, and part-time adult teachers increased 8.4 percent. Adult student enrollment increased by 13.9 percent.

	1972-73	1973-74	Percent of Increase FY 1973 to FY 1974	1974-75	Percent of Increase FY 1974 to FY 1975
Secondary FTE[22]	116,974	127,519	9.0	136,654	7.2
Post-secondary FTE[22]	40,605	46,555	14.7	48,057	3.2
Adult Full-time	5,698	6,313	10.8	6,249	-1.0
Adult Part-time	70,186	72,437	3.2	78,497	8.4
In-service Training	91,992	96,844	5.3	115,729	19.5
Pre-service Training	59,330	60,045	1.2	63,398	5.6

State Directors of Vocational Education were calling the situation "critical" and "desperate" in 1973-74, and several repeated these comments in 1974-75.[23] One State Director is distributing a very attractive salary scale hoping to attract qualified teachers from other States, a practice which will probably grow as the situation becomes worse. On the other hand, the number of States reporting shortages in detail -- by level and occupational service area -- were fewer in most cases than for 1973-74, and the number reporting no shortages has increased from six to thirteen.

Teacher Shortages	Number of States	
	1973-74	1974-75
None	6	13
Some	20	11
Moderate	14	10
Great	9	8
Secondary	35	27
Post-secondary	15	11
Adult	10	4
Agriculture	25	19
Distributive Education	17	10
Health Occupations	18	11
Home Economics	2	7

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[22] FTE: Full Time Equivalent.

[23] For a news commentary on the shortage, see Appendix B.

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Teacher Shortages	Number of States	
	1973-74	1974-75
Office Occupations	7	9
Technical	--	7
Trade and Industrial	28	18
Industrial Arts	11	13
Cooperative Vocational Education	6	8

Manpower Training Under CETA

How much skill training for employment was provided by the manpower programs in 1975, and how much did it cost compared with Vocational Education?

As near as can be determined, relatively little skill training was provided, and the cost is totally unknown. In the only data available nationally, there appears to have been a shift away from training in FY 1975 to make more funds available for public service employment and support services. Skill training under the Work Incentive Program (WIN) dropped from 46,890 enrollments in FY 1974 to 35,588 in FY 1975, down 24.1 percent.[24] WIN is used primarily for persons in families receiving aid to dependent children.

The number of persons receiving training under the Comprehensive Training and Employment Act (CETA) was 374,400, according to the Department of Labor. In 1973, Project Baseline reported, 149,593 persons were being trained under manpower training programs, and CETA was just getting started. Baseline figures, however, included only trainees in occupationally identifiable programs. CETA figures, like those that the Department of Labor previously published in the Manpower Report of the President, include everyone in classroom or on-the-job training. It is impossible to know how many of them were in remedial basic education programs or relatively unskilled programs.

	Total Persons Served by CETA	CETA Enrollments in Training Programs	
Title I	1,126,000	Classroom	292,000
		On-the-Job	73,800

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[24] Employment and Training Report of the President, 1976, pp. 98-99, 117.

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	Total Persons Served by CETA		CETA Enrollments in Training Programs
Title II	227,100	Classroom	5,100
		On-the-Job	2,400
Title VI	157,000	Classroom	800
		On-the-Job	300
TOTAL	1,510,100		374,400

The total appropriation for all CETA programs in FY 1975 was $3,740,750,000. No breakout is available showing the amount used for training. One way to arrive at an estimate, which was suggested by an information specialist in the U.S. Department of Labor, would be to use the same percent of total appropriations that training enrollments represent of total persons served. This would come to $927,331,925, or $2,476.85 per enrollee. That would compare with $2,028.74 per trainee in MDTA programs in FY 1973 and $4,326.24 per person in Economic Opportunity Act occupationally related programs that same year.[25] It must be recognized, however, that the actual cost of training was only a fraction of this amount. The bulk of the funds went for public service employment and support services.

There is no way to make comparisons with Vocational Education costs except in the total for each program. On that basis, it cost almost as much for the U.S. Department of Labor to provide training and employment services for 1½ million persons as it did for Vocational Education to provide training for fifteen million. Vocational Education at all levels -- Federal, State, and local -- cost $4,036,366,615, CETA cost $3,740,750,000. Even this comparison does not take into consideration the great differences in the two programs, primarily that Vocational Education costs are largely for actual job training while CETA costs are largely for support services.

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[25] See Baseline reports for FY 1973, Vol. III.

CHAPTER III

THE CRITICAL NEXT STEP

In 1976 the national Vocational Education Act was rewritten.[26] The need for many of the changes has probably been seen by most of those who have participated in the expansion of programs and enrollments, new directions and greater costs, under the Act of 1963 and the Amendments of 1968, 1972, and 1974. Some of the changes are extensive and basic. Whether Vocational Education responds to these changes and produces the results that Congress intended will only be known if there is an accurate, detailed and timely reporting system supplying the information.

Vocational Education's past accountability, although better than in any other area of education, has repeatedly been called into question. Adequate data were not being reported about kinds of students being trained for different occupations, where, by what kinds of instructors, in what kinds of facilities, with what results, and at what cost. One of the changes in the 1976 legislation is to provide the means to make such data available. Congress has laid down detailed requirements for reporting and accountability. At the heart of the Congressional mandate is a new national Vocational Education data system, based on standardized definitions and data elements specific enough to allow Congress and everyone else to keep up with what is going on in this increasingly important part of American education.

Congress also wrote into its new legislation some insurance that there will be enough inter-agency involvement at both the Federal and State levels so the system will meet the needs of all publicly supported occupational training programs. Simply stated, there is to be an end to the confusion and mystery about what is being done at the Federal, State, and local levels in providing employment training. The next step is to get on with the job of building a system that will bring about that result.

The U.S. Office of Education and the National Center for Educational Statistics (NCES) must jointly select the data elements and give them uniform definitions. To be uniform presumably means that they must represent the same things in the same way in every State. That in itself, will go a long way toward insuring more accurate data. After this is done, NCES will design and operate the system.

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[26] See Appendix A for complete text.

Baseline
Reports
Vol. I,
pp. 419-422
Vol. II,
pp. 15-39
Vol. III,
pp. 59-71
Vol. IV,
pp. 83-107

What has been making accountability so difficult?

The biggest single problem has been lack of adequate data. Gross statistics rather than precise detail have always characterized educational records above the local school level. There was nothing remarkable about this in the nineteenth and early twentieth centuries, when education was almost exclusively a local matter. But it is increasingly difficult to justify, and poses a dilemma that will have to be resolved. A major part of the State and local revenues from taxpayers in every State goes for education, yet little is known about the distribution of these funds and what is being accomplished through their expenditures. Vocational Education at the very least should be capable of cost justification. This is possible in only two, possibly three, States and in parts of a few others.[27] In the rest it is doubtful if either the taxpayers or the State education agencies have even the foggiest idea of a relationship between clock hours of instruction, cost per student, job placement, and success on the job. The same is true, of course, in every other educational program including engineering, law, medicine, dentistry, and business.

There was some excuse for collecting only gross data about Vocational Education students, programs, and costs at the State level when compiling such figures in more detail involved enormous amounts of hand-copying. But for more than a decade, with the emergence of computer technology, this has not been necessary. Nevertheless, most States not only are still unable to report relationships between courses of different lengths, student enrollments, job placement, job success and costs, but lack even a reasonable knowledge of these separate elements.

Course and program length vary widely at different levels of instruction, for different occupational programs, and among local schools. For two consecutive years Project Baseline attempted to get specific data on clock hours by course. Not more than three States had complete data.[27] A few others had data for some programs. The others had nothing better than averages, estimates, or frank admissions that course length was left entirely to the local schools and no knowledge was available as to what they were doing about it. Six States this year indicate that they are working toward some form of standardization.

Student enrollment information has improved greatly in recent years. Nearly half of the States have individual student characteristics in their computers,[28] and there is a strong trend in this direction. Most States, however, pay very little attention to the information after they get it. There is a remarkably widespread tendency to retrive only the data required for Federal reporting, and only in the form required. State agencies usually know almost nothing about their target populations -- such as the courses and programs in which each group may be concentrated, drop-out and job placement rates, changes from year to year, and trends -- although, in many States, the data which can supply this information could be obtained from their computers at any time.

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[27] Baseline data files. Some of the information in this chapter has been collected from the State Vocational Education Directors and their staff but is not included in Part 2, the Statistical Almanac, because of difficulties in tabulation.

[28] See Appendix C.

Several persistent problems with enrollment data stem from inadequate collection procedures or from deficiencies in the Federal reporting forms. Inadequate collection procedures, for example, are responsible for class or program enrollments instead of actual numbers of students. There is a historic tendency of the Vocational Education community to think in terms of programs rather than persons, of classes rather than individuals. As a result, there is still much more emphasis on programs than on the individuals who enroll in them, even in attempts at accountability. Students who enroll in two or more courses are often counted in local and State reports for each course in which they are enrolled. Federal reports require an unduplicated total, but in States not collecting individual student enrollment data, this is for the most part a contrived figure or an educated guess.

One of the enrollment data problems caused by an ambiguity in Federal reporting is that students below grade nine and even below grade seven are frequently counted at the secondary level, which they are allowed to do by the Federal forms. Thirty-eight States report that they do not include students below grade seven in their secondary enrollment figures, but at least five States admit that they do. Twenty-seven States include students below grade nine in their secondary enrollment figures. There would be nothing wrong with this if it was generally understood that the secondary level of education in the United States begins wherever States or local school districts decide, but that is not the case. Secondary or high school education begins almost universally at grade nine or ten. What are the schools accountable for in Vocational Education at the secondary level when some of those reported are actually in kindergarten?

The extent of the problem can be appreciated when it is known that in fourteen States, nineteen percent or more of the reported secondary enrollment totals are in grades below nine.[29] This includes several of the largest States in the Nation. In one State the percentage is 36.7; in another 35.0; in another 33.8; and in another 33.0. In one of the most populous industrial States, 31.7 percent of the reported secondary vocational enrollments is in career motivation courses in grades K-6.[29] Even in States reporting no students below grade nine in their secondary Vocational Education totals, the data are sometimes suspect. In one such State the number reported was greater than the State's entire high school population. This State uses a manual reporting system. Fortunately, examples of this kind are rare, and are usually corrected when pre-publication Baseline tables are sent back to the States for review.

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[29] Baseline files.

While accounting for students at the secondary level would not be too difficult if grades K-8 were identified separately, post-secondary and adult are hopelessly confused. Project Baseline made a study of State practices last year and found no consistency whatever. Adults are identified as post-secondary in some States and as a separate category at either the secondary or post-secondary level in others. Some States serve adults primarily through evening classes in secondary institutions, and others in post-secondary institutions. Many States have adults and regular full-time secondary and post-secondary students in the same classes, and have no way of separating them for reporting purposes.

The problem exists solely because of a tortured effort by the U.S. Office of Education to identify adults as an educational level, when actually they are a special category of students. It could easily be solved by classifying students as non-credit, rather than adult, who are in programs other than those leading to a secondary diploma or a post-secondary certificate or degree -- and by eliminating adult as a level. One of the problems with Federal definitions in the past, which is true in the case of adults, is that they have too often been based on the intent of the program rather than what the program actually does. Another problem, and more serious by far, is that almost all of the Federal definitions have been permissive rather than specific. Categories are defined as including certain characteristics rather than being limited to those characteristics. Definitions above all must be mutually exclusive or they are of no practical value.

Job placement data have been discussed briefly in the preceding chapter (p. 38), and it is the feeling of the Baseline staff that their quality has been improving over the past several years. Three or four years ago, there was little reason to believe that the data most States supplied the Federal Government in their annual reports were more than sheer guesswork. Since then, a number of greatly improved individual student followup systems have been developed and results validated. Followup data supplied by teachers, as noted in the preceding chapter, have also been validated in several States. There is still a substantial problem, however, with the followup information that most States have available. Once again, States tend to collect only what the Federal forms call for, and this does not tell very much about the actual results of Vocational Education programs. To be employed or unemployed at a particular point in time, a few months after getting out of school, is affected by too many factors other than the quality of one's training. Job market fluctuation, geographic location, and personal choice are only a few.

It is almost unbelievable that not a single State knows what happens to its target populations in terms of the numbers and percentages of each who are employed or even want to be employed in the fields for which they were trained. No State has any idea of the relative success of women or of different ethnic groups in one occupational program as compared with another. Even such information as the concentration of minority groups geographically and the effect this has on opportunities for employment in different occupations is totally lacking.

Some improvement has been evident in cost data. Traditionally, school bookkeeping has followed the policy of identifying only categorical expenditures such as instructional costs, administration, equipment and maintenance. A great many school systems in recent years have also been identifying the function or purpose for which funds are spent, including cost detail by course and instructional program. A research and development project supported by the National Institute of Education and known as the National Center for Higher Education Management Systems (NCHEMS) has spearheaded such a movement at the post-secondary level. In the meantime, very few States even know the complete cost of their programs. They know the gross expenditures of State and Federal funds and part of the local school expenditures, but little more. Indirect costs such as maintenance and administration are rarely known. Costs per occupational program, or course, or contact hour, or student seem to be of no great concern to most vocational educators, administrators, State officials, or the U.S. Office of Education.

Neither the Federal Government nor most States have any idea of the actual competence of Vocational Education graduates when they complete their programs. This has been the single point most vulnerable to attacks by critics of Vocational Education in the schools. It is often discussed, and research funds are being used to develop a few competency-based instructional programs. But there seems to be a reluctance on the part of the Vocational Education community to identify publicly the actual levels of skill achieved by its students as the result of money spent and training provided. At any rate, nowhere above the classroom level is this knowledge available.

There might be some indication of student competencies if those of the instructional personnel were known, but this knowledge is also lacking. Most if not all States require certification, but temporary waivers bring many untrained vocational teachers into the classroom when others are not available. And certification itself is a poor measure of competence, because it is based on time spent in training and on the job, rather than on knowledge or performance. It is not hard to find highly competent and highly successful Vocational Education teachers in almost any school system in the Nation. But information for the public record is too often obscure and inaccessible.

Two other kinds of data, completely lacking in all but a few States, would provide State agencies, State legislatures, the Federal Government, and the public with a much better knowledge of what they are getting for their money. One is student opinion of the training received by Vocational Education students, what it did for them, and whether it was worth their time and effort. The other is what their employers think of their training. A few States do collect student opinion, and at least one receives such information from employers. Both kinds of data are subjective and may be biased, but this does not detract from their value. Aside from identifying good programs and poor programs in the local schools, they indicate the relative benefits of different kinds of programs to various kinds of students. This kind of knowledge would seem to be essential if special efforts for target populations are to be successful. In any case, public accountability is difficult, if not impossible, without the judgment of those toward whom the entire Vocational Education effort is directed -- individuals who receive training for employment, and the employers who hire them.

Baseline Supplemental Report, *A Data Base for Vocational Education and Manpower Training*, pp. 3-10.

What should the public know about Vocational Education?

The public should know *who* is being trained for *what*, *where*, *how much it costs*, and *with what results*.[30] *Who* means not just whether those being trained are high school students, post-secondary students or adults. Nor does it mean blanket totals of males and females, ethnic groups, disadvantaged and handicapped. *Who* means persons, and persons mean individuals. When the public is told that there are fifteen million students enrolled in Vocational Education in the United States, it should know who they are as individuals. How many of them are in their last year, and, therefore, can be expected to enter the labor market when they complete their programs? And, how many are two or three years away from seeking employment?

Moreover, of the fifteen million persons enrolled in Vocational Education, which are female? Blacks? Members of other minority groups? Disadvantaged? Handicapped? Not how many, but which ones? These are special target populations that, according to public policy determined by Congress, shall receive special emphasis and consideration. Where are they to be found among the fifteen million? Do they have access to programs through which each can achieve his or her greatest potential on the basis of where they live, their previous education, and special services provided them by Vocational Education? Which ones do and which ones do not? Which of the fifteen million have merely been dumped into Vocational Education because they were misfits, troublemakers, or failures in academic programs? These are things the public is not being told, nor have most State agencies and the Federal Government been trying to find out.

Trained for *what* means simply what it says -- what occupations? It does not mean, for example, the label that covers the multiudinous skill programs historically grouped together as trade and industrial occupations (T&I). By no stretch of the imagination can beauty shop operators, garage mechanics, and tool and die makers be considered a single occupation, but T&I includes them all. Technical education is a similar catch-all that includes such disparate occupations as electronics and interior decorating, oceanography and aviation. None of the eight traditional occupational areas is a single occupation anymore. There are dozens of programs that cannot logically be placed in any of them, and there are even more hyphenated occupations that cut clearly across the lines separating them.

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[30] Congress also wants to know in what kinds of facilities. P.L. 94-482, Sec. 161 (a) (1) (E).

If training for the employment market is to make any sense at all, there must be a way to relate Vocational Education programs to actual employment needs. Clearly it cannot be done through the traditional groupings of instructional programs. The only alternative that has been attempted has been a taxonomy of several hundred courses and job titles worked out by the U.S. Office of Education and the U.S. Department of Labor. This is nearly as unworkable as the eight traditional areas, for two reasons: There are far too many courses/job titles to be handled effectively, and there is no standardization in business and industry in the use of job titles. They are the product of a logical classification system by the U.S. Department of Labor, but they reflect only partially what the employment world is really like. The public needs to know the actual skills that students in Vocational Education are learning. Vocational administrators need to know this also, but very few of them have been trying to find out.

Where the fifteen million Vocational Education students are being trained means in the big cities or in small towns, within easy access for those who need the training or in remote centers, close geographically to the businesses and industries where students may expect to find employment or far away from where the jobs are. It obviously means not only where the training takes place but where the students live. It means the socio-economic environment of one neighborhood as compared with another when training students with one set of characteristics as compared with another. It means one kind of neighborhood as compared with another when preparing students for one occupation as compared with another.

If the public is going to know that vocational educators are in fact attempting to match students and programs on the basis of the geographical distribution of employment opportunities, and on the basis of each student's home environment to the extent that career opportunities are thus affected, the public needs this information. There are reasons to believe that a considerable amount of this kind of matching students with the programs best for them is being done at the local level. Wherever it is not being done the need to know is obviously greater. In any case, the public is not being told, and for the sake of public confidence and improving the performance of Vocational Education, the public should be told.

How much it costs the local schools, the States, and the Federal Government to provide Vocational Education for fifteen million students does not mean appropriations; it means expenditures. And the bulk of the expenditures are made at one point -- the local school districts and educational institutions. So what is the public being told about how money is really being spent in the schools? Almost nothing. Local, State, and Federal reports usually show how much Federal money was used and how much State money was used. These are merely the total amounts received and spent or encumbered. They are the local school's portion of appropriations. Local school financial reports also show how much local money was spent. State and Federal reports just lump these figures together with State expenditures, for no other reason presumably than to comply with Federal reporting requirements.

Nowhere in this system is the public told how much is spent for each kind of student. There is no information as to the cost of one program compared with another. Expenditures per clock hour of instruction either in total or by occupational programs are not revealed. Most local schools in all but about three States do not even know the actual amount they spend for Vocational Education. They know only the direct expenditures like teachers' salaries and equipment. They do not know the indirect costs like overhead, utilities, custodial services, and sometimes buildings and equipment.

What about the results? The public is being told only numbers and percentages of students completing programs who are employed either in jobs for which they were trained or in non-related jobs, or are continuing in school, or are unemployed looking for work, or are not available for employment. Which students are being employed? In what occupations? How well do they do in their jobs compared with employees who have not had Vocational Education? How much did they really learn that qualified them for employment? Did they learn anything else in Vocational Education that has helped them after they left school? Was it Vocational Education that prompted them or made it possible for them to continue in school?

Does Vocational Education produce different results for different kinds of people? Do different programs produce different results? Different schools? Different States? None of these questions can be answered by more than a scattering of administrators in the United States, yet, all should have this information if they are to do their jobs properly. And the public needs to know. Should more money be spent for Vocational Education, and if so, how and where and for what kinds of programs and for what kinds of students? These are public decisions the public cannot make without knowing much more than it does now about the results to be expected.

What does Baseline recommend?

First of all, the system that will produce the answers to these questions should have two essential features.

1. It should be an extention at the Federal level of the automated management information systems (MIS) already designed and in operation in many of the States. These systems will require some modification to include the standardized data elements

required for the national system, but in most cases that should present no great problem. States that do not have automated systems have available the experience of States that do and can implement their own systems in complete compatibility with the national system. This raises questions of time and cost, which will be discussed later. The essential point is to design the national system in such a way that this will be the inevitable result, not merely an option.

2. It should be designed in such a way that in a reasonably short time only student-based data will be collected and transmitted at each successive level, without first having been added together in categories by local school districts or by the States. During the first two or three years, gross data also will have to be accepted at the national level, because many States will not yet be capable of supplying anything else. But States that can do so should be allowed as soon as the system is operational to supply the National Center for Educational Statistics (NCES) with student data elements by transmitting copies of their data tapes. Their Federal reports, in other words, will be fully automated, and a considerable amount of paperwork eliminated. NCES should anticipate that in a reasonably short time all States will make their annual reports on magnetic tape, and the national data base will contain only student data elements.

   This means that States would not be required to report, for example, the number of males and females in each ethnic group who are enrolled in each of several hundred programs or courses.[31] Instead, for each student being reported, there would be that student's sex, ethnic identity and program in which enrolled -- no name or address or identifying number, just a few characteristics under a sequential number that the local school can make impossible for anyone ever to trace. Instructional data, program data, expenditure data, and facility data, which are collected by course, can all be tied to student data elements through course codes. Completer and leaver data could be tied directly to enrollment files also, but to do so would require identifying individual students and, therefore, would be impossible. The separate completer and leaver files should, however, contain the same additional data elements as the enrollment files, such as sex, ethnic identity, and program.

Whenever either of these features is suggested there always seems to be some strong supporters and some equally strong opponents and a lot of doubt in between. But there are compelling reasons for designing the national system in this way. The reason for the first suggestion is simple logic: Why go back and start all over when the States are already some distance down the road doing the thing that has to be done? Those States that have developed automated systems have experience; they have solved many of the problems in using automation, both technical and operational; they know how to make good information systems work, and they already have the equipment. Adding or changing data elements to achieve national standardization will require new input and new computer programs, but the same procedures that the schools are already familiar with can continue to be used, and the same people who have been operating the systems can go right on doing what they know how to do.

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[31] The current Federal report forms list 220 OE Codes, with blank lines for more. There are 410 in the present taxonomy and many States use codes not included in the 200 on their Federal forms.

The second feature is the one that raises all kinds of opposition whenever it is suggested, but sooner or later it will have to be adopted if accurate and timely reporting are ever to be a reality. Those who oppose collecting data in units of one instead of totals sometimes feel that the volume at the national level would be so great that easy access or economical functioning of the system would be impossible. A careful look at current computer technology and costs suggests that such fears are not justified.

Even so, the question may still persist, why do it? The answer has been discussed in some detail in the preceding section of this report, but it is appropriate to return to that discussion. For example, if someone wants to know how many black students in inner city high schools are being concentrated in low-paying occupational programs as compared with other programs, and whether this is true of females more than males, there are only three ways of finding out. One is to make a special study, which takes a considerable amount of time and resources, and yields information only valid at a single point in time.

The second way is to include the necessary data elements on the annual reporting forms that all school districts have to fill out. This would involve planning several years ahead of time, designing the forms (which would logically call for similar data about each of the other minority groups enrolled in each of two hundred or more occupational programs), getting the forms approved by the Office of Management and Budget, sending the forms out to the States for distribution to the schools, collecting the forms, compiling and verifying the data at the State level, and, finally, adding all of the State totals at the national level.

The third way is to have individual student characteristics in separate files on magnetic tape representing every Vocational Education student in the United States, and getting a computer printout, using either pre-determined or special programming. This requires, of course, that every school district in the United States collect the information in the first place and that it be transmitted and stored in machine-readable form. It would take several years to accomplish, but after that, the time and cost of adding new information to the system and updating each year would be relatively negligible.

The technology is here, the cost is apparently not in any way prohibitive, so why not? There are still other advantages which seem to be conclusive. It is the only way complete accuracy can ever be achieved. It makes timely updating possible. And it produces a data base capable of reporting every conceivable relationship between student characteristics, programs and program characteristics, geographic distribution, costs, and results. There is a final advantage that goes back to the first of the two features suggested for a national data system: Nearly half of the States are already collecting their data this way or are developing management information systems to do so. Any other approach to a national data system for Vocational Education would appear to be a retreat from progress already made.

What data elements should be included in the new system?

Congress has made this fairly clear: Information on vocational students (including race and sex), programs, program completers and leavers, staff, facilities, and expenditures must be included.[32] But how will that basic list be translated into the separate data elements which can be added together and compared?

In addition, a number of other provisions in the Act make it necessary for the States to collect specific kinds of information. Student, program, and expenditure data, for example, must be collected at each level of education and in each educational institution.[33] Data must be collected about publicly supported training programs other than Vocational Education, and this can mean high school programs training students for employment which until now have been overlooked.[34] It expressly includes training under the Comprehensive Employment and Training Act.[35]

Congress did not stipulate that any of these must be included in the national data system. But since they have to be collected, it is not unreasonable to suggest that they be collected in every State according to the standardized definitions and under the requirements of that national system. With this in mind, and on the basis of Project Baseline's experience in analyzing the data elements that have been used until now, the following suggestions are offered. Data elements described here are for gross data, because many States will have to supply gross data at first. Individual student and program data elements can readily be identified in the gross data descriptions. The gross data are too voluminous to expect any State to report them to the Federal Government, but each State will have to collect them and have them available for planning and accountability. As soon as automation in the States is complete, all of these should be in the national data base:

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[32] P.L. 94-482, Sec. 161 (a) (1).
[33] P.L. 94-482, Sec. 107 (b) (2).
[34] P.L. 94-482, Sec. 106 (a) (4) (D).
[35] P.L. 94-482, Sec. 106 (a) (4) (C).

1. Vocational Students

   A. Total unduplicated numbers of males and females in each ethnic group enrolled in each training or retraining program (OE code)[36] at each grade level in each educational institution (FICE Code)[37] in the State.

   B. Total numbers of students in other than vocational training or retraining programs who are nevertheless receiving training for employment at each grade level in each occupational program (OE Code) in each educational institution (FICE Code) in the State.

   C. Total numbers of students who are enrolled in non-training or retraining vocational programs and are not receiving training for employment (orientation, exploratory, pre-vocational, remedial, and other special programs) at each grade level in each educational institution (FICE Code) in the State.

   D. Numbers of students in A above who are enrolled at each grade level in each Vocational Education training or retraining programs (OE Code) who are handicapped, disadvantaged, and/or in cooperative work experience programs. Note: Only students in this group represent a duplicate count. There are no duplications among students counted under A, B, and C.

2. Programs

   A. A list of Vocational Education training and retraining programs (OE Code) offered at each educational institution (FICE Code) in the State, total clock hours of instruction in each, and number of students per instructor in each.

   B. A basic list of facilities and equipment (prepared by the U.S. Office of Education) that should be available for minimum instructional purposes in each Vocational Education training and retraining program (OE Code) in the State.

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[36] See next section for Baseline suggestions regarding identity of course, program, and student.

[37] Federal Interagency Committee on Education - a code used to identify all educational institutions in the U.S.

C. Minimum levels of competency (determined by local advisory councils) to be achieved by students in each Vocational Education training and retraining program (OE Code) in each educational institution (FICE Code) in the State and percentages of students in each who achieved these levels during the preceding school year.

3. Program Completers and Leavers

A note of explanation is needed here. Under the 1976 legislation each State is required, sometime during the five-year period of the Act, to evaluate each instructional program in each institution in the State, "by using data collected, wherever possible, by statistically valid sampling techniques .... which purports to impart entry level job skills."[38] Whether a fifth of the programs are to be thus evaluated each year or a total evaluation is to be made only once during each five years is not clear in the law. However, only two measurements of each program's success are required: The extent to which completers and leavers (1) found "employment in occupations related to their training," and (2) "are considered by their employers to be well-trained and prepared for employment." In spite of the lack of clarity as to when these evaluations must be made, the law does not say that an annual followup should no longer be made, nor that the followup can collect data only by sampling techniques. These is no reason to believe that Congress intended the evaluations during the five years to provide the only followup data to be included in the national data base. And, if these were the only data available, knowledge about the results of the Vocational Education programs would be inadequate for either planning or public support. The Baseline staff suggests that each State data system and the national system as rapidly as possible contain the data elements described below. The Baseline staff further believes that as long as the definitions used are standardized nationally, each State should be allowed to collect the data anyway it wants to. The five-year evaluation using a sampling technique will serve an added purpose of validating the annual data collection procedures.

A. Numbers of male, female, disadvantaged, handicapped, black and other ethnically identified students who were enrolled during the preceding year in each Vocational Education training or retraining program (OE Code) in each educational institution (FICE Code) and who completed their training or left with job entry skills.

B. Numbers of former students in each category in A who were available for full-time employment, and were:

(1) Employed full-time in the occupations for which they were trained or related occupations by November 15 of the year following their completion or leaving.

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[38] P.L. 94-482, Sec. 112 (b) (B).

(2) Employed full-time in non-related occupations by November 15 of the year following their completion or leaving.
(3) Known to be unemployed by November 15 of the calendar year following their completion or leaving.

C. Numbers of students in each category in A who were not available for full-time employment:

(1) But were employed part-time in the fields for which they were trained or related fields by November 15 of the year following their completion or leaving.
(2) Because they were continuing their education.
(3) Because of personal reasons.
(4) But were known to be expecting to seek employment in the fields for which they were trained or related fields at some time in the future.

4. Staff

A. Numbers of male, female, black and other ethnically identified non-teaching personnel employed full-time at the State level, at intermediate district levels, and at the local school level in each of the following categories:

(1) Administration and supervision.
(2) Teacher educators.
(3) Technical assistance (program development).
(4) Research and development.
(5) Vocational guidance and counseling.

B. Numbers of male, female, black and other ethnically identified vocational teachers in each program (OE Code) in each educational institution (FICE Code) and percent of full-time taught by each.

C. Numbers of vocational teachers in each program (OE Code) in each educational institution (FICE Code) who received additional in-service classroom instruction during the preceding school year.

D. Numbers of vocational teachers in each program (OE Code) in each educational institution (FICE Code) who received additional work experience in their fields during the year.

E. Numbers of teacher trainees who received pre-service instruction in each program (OE Code) in each educational institution (FICE Code) during the preceding school year.

5. Facilities

A. Whether or not the basic facilities and equipment (2 B above) are available in each Vocational Education training or retraining program (OE Code) in each educational institution (FICE Code) in the State.

B. Whether or not the basic facilities and equipment are available in each non-Vocational Education training program (1 B above) in the State.

6. Expenditures

A. Total actual expenditures, direct and indirect, for each Vocational Education training or retraining program (OE code) in each educational institution (FICE Code) in the State.

B. Total actual expenditures, direct and indirect, for each Vocational Education non-training program (OE Code) in each educational institution (FICE Code) in the State.

C. Total actual expenditures, direct and indirect, for each non-Vocational Education training or retraining program (OE Code) in each educational (FICE Code) or non-educational (State Code) institution in the State.

D. Federal expenditures included in each of the above (balance in each case is State and local).

Data Elements and Definitions

A few data elements used in reporting Vocational Education are not recommended in the new system. Secondary, post-secondary and adult levels have been left out of the preceding list because they are difficult to define, and they are not needed. Grade levels K-14 are much more accurate and have none of the problems of representing different things in different States and school districts. The adult classification, as noted earlier, is not a level at all. But there is a classification that includes many adults and does require definition. This is non-credit education, which should be included in the national data system as another level in addition to K-14.

Also omitted are the traditional occupational service areas -- agriculture, distributive education, consumer and homemaking, health, occupational home economics, office occupations, technical education, and trade and industry. Their shortcomings as data elements have already been discussed. Much more accurate is the U.S. Office of Education's taxonomy of course and job titles referred to as the OE code. But as also noted earlier, there is a problem of too many course codes either for relating training programs to employment demand or for realistic reporting and analysis. Moreover, Vocational Education programs for the purpose of identifying students' occupational goals should not be identical with courses except when a single course qualifies as a program. Logically, there cannot be as many programs as courses. The taxonomy of course and job titles should be further refined to a taxonomy of programs and perhaps groups of job titles.

Another solution would be for the U.S. Office of Education to complete the work it began a number of years ago with the U.S, Department of Labor to develop a group of fifteen or twenty clusters of courses encompassing the entire list of codes in the taxonomy.

To do it properly would first require a complete review and updating of the taxonomy, and apparently that is already underway. If the taxonomy is brought up to date and kept up to date, and all of the course codes are organized in a manageable list of clusters of related employment skills, Vocational Education data of all kinds will make a lot more sense than they do now. If this or something like it is not done, the national data system can never be expected to serve the purposes intended in the 1976 legislation.

A number of new data elements will be required in the new system, and these are fairly clear in the Act. One is facilities. Baseline suggests that instead of the enormous expense and added work of maintaining national or State inventories, the U.S. Office of Education should determine the basic facilities and equipment that should be available to adequately train students in each program. Individual programs in each local school could then be identified as having the minimum equipment or not, and States could determine the percentages of both programs and students enrolled where minimum facilities are available.

Another new data element required is the identity of local schools, so States can show in their planning and in their accountability reports the institutions to which funds are allocated and the reasons in each case. The national coding system known as the FICE Code has already been developed by NCES -- every school is identified with its location, and it would be folly not to use this code. ZIP codes could be identified with the FICE codes, and the State and national data systems could then be related to demographic ZIP code profiles developed by the Bureau of the Census for analyzing expenditure allocations and program results by kinds of student populations.

In arriving at standardized definitions, Baseline hopes the U.S. Office of Education will give serious consideration to one list already developed. A task force initiated by the National Association of State Directors of Vocational Education has defined forty-five terms found in current or recently proposed legislation.[39] Both the Office of Education and NCES were represented on that task force, as well as the National Advisory Council on Vocational Education, the National Association of Junior and Community Colleges, and Project Baseline, among others. The definitions were subsequently approved by a vote of the Association, and several of them were used by Congress in the 1976 legislation. Fifteen States have either adopted the definitions, plan to do so, or are waiting only for Federal action. Ten States indicate some opposition to the definitions, and in a few cases more work may have to be done. But they do represent a place to begin.

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[39] For a list of the definitions and States planning to use them, see Appendix D.

Additional Suggestions

Project Baseline has these final suggestions for facilitating the development of the State and national vocational data systems.

1. Since NCES has specific authority under the Educational Amendments of 1972 to help the States and local schools improve and automate their educational data systems, it should request funds in its annual appropriations to do so. It should use those funds particularly during the next couple years to help automate States and school districts where manual reporting systems are still in use for Vocational Education. Where automation has already been established, States and local school districts should be assisted in adapting their systems to the requirements of the new national system.

2. The newly authorized Occupational Information Committees at both the Federal and State levels should concentrate on developing compatible data systems for each of the other publicly supported training programs from which data will be needed, and on producing a reliable compatible employment market data system.

3. Congress should consider extending the national Vocational Education data system to include all elementary and secondary programs receiving benefits under the Elementary and Secondary Educational Act and all other educational support programs.

4. The target date of October 1, 1977 for the new national data system should be clarified, either by Congress or in the Rules and Regulations now being drafted for administration of the legislation. There is no reason the data elements and standardized definitions cannot be completed by then, even with review and suggestions by the States, which should be included in their development. But it is unrealistic to expect those data elements to be used the first year. There is no way State and local school records can be changed over from one set of data elements and definitions to another without time for procedures to be developed and explained, new systems tested, reporting schedules worked out, and approvals obtained all the way down the line from the U.S. Office of Management and Budget to local school boards. In some States and local school districts, any substantial changes in the data they collect will cost extra money, and this gets into the whole annual budgeting process. For the Federal Government to attempt to develop a system that ignores all these constraints would result in data so incomplete and garbled as to be virtually meaningless.

> One of the ploys which may be under consideration is for NCES to issue standardized definitions for the elements already being collected and simply take over the present Office of Education system, gradually bringing it around to the new system Congress had in mind. This has several faults. Changes would be much more difficult to make than if the system were simply redesigned in the first place. Moreover, the Office of Education knows how to operate its system, and can probably do so with much less confusion and more satisfactory results than another agency. Even that kind of transfer involves changing procedures and acquainting new people with what they have to do. The biggest objection, however, would be that little or no time would be allowed for involving the States, and this would almost guarantee that the new system would not work.

The Baseline staff suggests that an extra year be allowed for designing the new national system, and that the U.S. Office of Education continue its data collection program until the new system is in full operation. The needs of the State agencies for planning and accountability, and the needs of Congress and the U.S. Office of Education to know what is being done under the new legislation are too important to be jeopardized by a data system so hastily conceived and poorly implemented that it creates a gap even in the information available at the present time. The worst thing that could happen would be for the U.S. Office of Education and the National Center for Educational Statistics to find themselves unable to produce a better data system at all because they were in too much of a hurry.

CHAPTER IV

SOME OBSERVATIONS

During any year of the study of Vocational Education there are bits and pieces of information not being compiled that are nevertheless valueable in describing the state of the art at any given time. Frequently they suggest areas where further information is needed. After two years of the Baseline study, an effort was made to have knowledgeable persons explore a number of areas in which such informational gaps were being found, and seven supplemental reports were published during Baseline's third year. Two more were published last year.

No additional studies were planned for this year, although there are areas which could be further explored. Instead, some of the bits and pieces that do not merit further exploration, and some perhaps which do, have been selected for discussion here. The topic of the first is common knowledge, but some of the information has not been included in previous Baseline reports and may not be available anywhere else. It seems appropriate, with the recent enactment of a major new Congressional Act, to examine what has been accomplished in other than strictly statistical summaries.

What has happened to Vocational Education as a result of the Federal Legislation of the 1960s? Vols. I-V

The impact is evident in virtually every State and Federal report since 1965. The Baseline reports have measured almost spectacular increases in enrollment, occupational programs, instructional personnel, and expenditures. It is difficult to believe that this expansion would have occurred without the Vocational Education Act of 1963 and the Amendments of 1968. In what ways can that growth be attributed to the Federal legislation?

The most controversial feature of the 1963 Act was its elimination of restrictions on what could be offered, opening up the entire universe of skill training below the baccalaureate level. This has had the effect of increasing course offerings from a mere handful to hundreds, and more are being added every year. The second most controversial feature was a substantial increase of Federal support. This has had a major affect on the growth of Vocational Education from 1963 to the present, an enrollment increase alone of 265 percent.[40] Even greater increases in State and local support may be attributed to some extent to the increase of Federal funds through a snow-balling effect.

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[40] Based on an enrollment of 4,217,198 in FY 1963. U.S. Department of Health, Education and Welfare Digest of Annual Reports 1960-63, U.S. Government Printing Office, Washington, D.C. 1964.

Further evidence of impact documented by the Baseline study has been in the use of research and development funds. The 1963 Act called for major updating of many existing programs, redirection of the organization and purposes of Vocational Education, and development of extensive new programs to meet the changing needs of business and industry for trained personnel. Fairly substantial funds were authorized to bring about these changes through research. Not all of the funds were appropriated, and not all of those that were produced anything of known benefit. But in most cases there is evidence of direct results, often of far-reaching importance. In many clearly documented cases the initial Federal investment has resulted in changes affecting the training of hundreds of thousands of individuals, sometimes for entire industries. No segment of American education has changed so much in such a short time affecting so many students as Vocational Education since 1963, and it is inconceivable that research funds under the 1963 Act were not involved in one way or another with most of that development.

Probably the most widespread new concept to enter American education in several generations is career education, and it, too, is part of the impact of the 1963 and 1968 Vocational Education legislation. It developed partly as a result of broadening the instructional program to include prevocational courses, and partly as a result of research and development funds being used to produce instructional materials and pay for experimental programs. From the beginning Federal funds for special innovative projects under Part D of the Act were used completely for developing experimental models of career education in every State. Many of the research funds under Part C of the Act were also fed into this effort. It is true that many local schools and to some extent a few of the States had already been experimenting with the concept on their own, but Federal funds and leadership moved it from relative obscurity to its current widespread activity.

With the great expansion of Vocational Education since 1963, and the emergence of career education as a major objective particularly at the secondary and post-secondary levels, another impact of the Federal legislation is evident. This is public support. Vocational Education has always been supported in theory, but in practice too often only "for other people's children." That situation has largely changed. Vocational Education is more popular now than at any time in its history. The Baseline staff have talked with many administrators, teachers, parents, business people, and labor representatives in local communities in a number of States and have found this to be true. Among other evidences has been a change in public attitudes in some communities from opposing bond issues or mill levies for Vocational Education to supporting them where such support has been needed.

An example can be found in one of the most celebrated and successful Vocational Education programs in the country, the Skyline Career Development Center in Dallas, Texas. As late as 1969, when Skyline was under construction, the Vice-President of the Dallas Board of Education called it a "white elephant." Dr. Bill Stamps, who was at that time in charge of developing the school's instructional program, says a lot of opposition had to be overcome. The Dallas News had at one time editorialized on the need for the school to "save thousands of youngsters from welfare roles and the police line-ups, and make them just as capable of caring for themselves and their families as the high school graduates who go on to college."[41] In other words, Vocational Education for other people's children. Today Skyline is the pride of the Dallas schools, drawing students from all over the city. An evaluation team last year recommended building a second school like Skyline in the Dallas District.

Another example is in Trumbell County, Ohio, where mill levies for a Joint Vocational School District failed five times between 1967 and 1974. Leo Difford, who is now Superintendent of the Joint District, says, "I think it wasn't so much the taxes but the lack of information, and the public just felt it was for someone else's children rather than their own."[42] The County Superintendent, George Morar, says he and others worked for seven years to get a comprehensive Vocational Education program in the County. "Leo Difford and I made it known throughout the County that anytime three people and either a large or small pot of coffee were assembled we would go there and speak to them about Vocational Education."[43] He estimated that they spoke individually "seventy, eighty, or ninety times during that promotional period." On the sixth try, in 1975, the mill levy passed by a large majority.

In the early 1950s there were only about four or five experimental two-year Associate of Arts nursing programs in the United States. Dr. Bob Hannelly was Dean of a Community College in Phoenix, Arizona, and he had wanted to add the nursing program to his curriculum since he first heard about it in 1948. It took him eleven years to convince his Board and the community that it was a good idea. At one point, he says, "When it began to come out in the newspapers that I was working on this, some of the old prejudiced instructors in the hospital schools called me up and one of them called me up at midnight and said, 'you are going against God's Law.'

"I said, 'What is God's Law?' "She said, 'Three years.'"[44]

In the fall of 1975 the community college district, of which Dr. Hannelly had become President, had two-year associate of arts nursing programs on five campuses with a total enrollment of nearly 1,000 students.

These are just examples which could be duplicated thousands of times in schools in every State in the Nation. The contrast in public attitudes toward Vocational Education before the Act of 1963 and after is so great that it is sometimes difficult to believe. The Act itself was certainly not alone in making it happen, but there can be no doubt that it was a major factor, perhaps the leading factor.

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[41] Interview with William Stamps, Assistant Superintendent for Instructional Services, Dallas School District, Dallas, Texas, March 2, 1976.

[42] Interview with Leo Difford, Superintendent, Joint Vocational School District, Warren, Ohio, March 23, 1976.

[43] Interview with George Morar, Trumbell County School Superintendent, Warren, Ohio, March 24, 1976.

[44] Interview with Robert Hannelly, retired former Dean of Phoenix College, and former President, Maricopa County Community College District, Phoenix Arizona, February 12, 1976.

What are the strengths of Vocational Education today?

There are at least four: relevance to the real world; widespread availability; outstanding programs to be found almost everywhere; and an apparently better than average employment rate for graduates.

Heading the list has to be its relevance in an American educational system which had become heavily overbalanced with academic emphasis. Public education has for generations been the means through which sons and daughters of working people as well as of business and professional groups could advance themselves economically. Until World War II an education largely academic in content and purpose was usually adequate. But after the technological revolution during and following World War II, this was no longer true. At the same time it became impossible for the employment market to absorb an increasing number of the high school graduates who were being prepared for nothing more than entering college. The only alternatives were: to go through high school and even college simply to face unemployment afterwards; to drop out of school and join the unskilled unemployed; or to get some specific training for a job while going to school.

The evidence is overwhelming that Vocational Education is attacking the problem of relevancy in American education. The national interest in career education is one indicator. The rapidly growing popularity of Vocational Education courses and programs among students is another. The change in American attitudes from supporting Vocational Education in theory alone to supporting it in fact, and particularly in local schools, is unmistakable.

The second strength to be observed in Vocational Education is its availability. High schools are available to everyone, and there are few high schools in the United States where Vocational Education is not offered. Many of them are comprehensive institutions with complete academic and vocational programs through which a student may prepare for almost any career he or she wants to pursue. In some cases, students are transported from their high schools to area skill centers in which a wide range of skill training is available. Even small high schools usually offer two or three Vocational Education programs.

And because vocational facilities and equipment are so widely available in community high schools and skill centers, adults are able to use them at night. Other facilities are also available for adults during the day in a large number of communities. Many adults take advantage of post-secondary Vocational Education opportunities, most of which are found in community colleges. The growth of community colleges in the past ten to fifteen years has been phenomenal. Spearheading much of it has been the growth of technical education programs in post-secondary Vocational Education. As institutions located in and serving local communities, they have made training at this level almost as widely available as secondary programs in a few States.

The third strength Vocational Education is exhibiting with increasing frequency is the dynamic quality of a great number of programs in the local schools. This is not something that can easily be documented, because until there are satisfactory national performance measurements in Vocational Education, their identity is a matter of subjective judgment. Nevertheless, they do exist, as anyone who has visited even a few schools anywhere in the country can verify.

Project Baseline has in its files hundreds of examples of outstanding programs. And whenever an opportunity arises to visit additional schools and look closely at their programs, almost invariably new examples are found. It can be said with almost complete certainty that such programs are in operation in every part of the United States at every level and in every curriculum. They are found in multi-million dollar facilities like the Skyline Center in Dallas, Texas, and in century-old small town high schools like La Brae in Warren, Ohio. Because of the dynamic expansion of Vocational Education in recent years, there may be more outstanding programs in this segment of American education than in any other.

In spite of the inadequacy of data about competency and satisfaction of vocational graduates, there is one source of evidence which demonstrates success. This is the employment rate of persons who have completed vocational programs. When the Baseline Project began, the data looked good but could not be trusted. There are still questions about their complete validity. But as increasingly exacting standards in the follow-up are being established by many States, the results previously obtained are being verified to an extent that is both surprising and encouraging.

The significant figure, the Baseline staff feels, is the percentage of those available for work who are employed. This ignores the relationship between field of training and the job obtained, but it also ignores the substantial number of former students each year who for reasons of their own do not seek employment. It is not a wholly satisfactory figure on which to base the employability of former students as a result of their training, but neither are the U.S. Department of Labor's figures for employment and unemployment rates. It is simply the best that is available. And considering other evidence that Vocational Education is producing impressive results -- growing public approval, support by business and industry, and great numbers of outstanding programs -- a higher-than-average employment rate is not at all surprising.

What are the weaknesses of Vocational Education today?

They include -- not in any relative order -- lack of standardization, inequality of opportunity, lack of flexibility, neglect of work experience, and inadequate planning. None of these is fatal, obviously, or Vocational Education would be declining instead of expanding. Nevertheless, they do represent problems that impair the effectiveness of what is being done and threaten the accomplishment of what still needs to be done.

Too much standardization would stifle the creative growth and constant change that are necessary to keep up with student and employer needs.

Training programs have had to be developed for the particular economic requirements of individual communities. Programs suited to the population of one State must often differ to some extent from thos in another State. But these differences are more in courses and programs offered than in their content. Standards for achievement within the same programs should not be different anywhere in the country.

Lack of standardization means that programs with the same title may provide a few weeks of training in one case and a full year in another. An auto mechanics course in one school will train students in making routine repairs, while in another it includes the use of sophisticated testing machines. Secretarial training may require two years of courses in one State and only a one-semester course in an adjoining State. Achievement levels and completion goals are set in some cases by State requirements, but in most cases by local schools or individual teachers.

This is a situation often lamented but seldom examined. Competency-based instruction has made considerable headway, a move in the right direction but not far enough. Academic subjects have developed standards for achievement by which students and programs are measured, and although there is currently a great deal of controversy over the instruments of measurement -- standardized tests and the validity of test scores -- there is strong public support of the idea of achievement standards. There should be. It is the only way of knowing that students who complete certain programs in the schools have reached certain levels of competence.

The issue is usually confined to the so-called basics in education -- communications and mathematics. There are compelling reasons to include Vocational Education as well. If skill training for employment is to be a responsibility of the schools, and if up to eighty percent of the school population must have skill training by the time they leave high school, they and their parents, as well as employers, should have some idea of what they have learned and how competent they are.

Criticism of Vocational Education has often been based on the complete lack of knowledge about the effectiveness of skill training in the schools in preparing students for satisfying careers. Follow-up data and long-range follow up studies provide some information, and it is generally favorable. But is does not get to the real question -- just what do Vocational Education students learn, and how competent are they when they leave school?

There is also a practical reason for some national standardization of courses and programs. The American people have become, to a considerable extent, a mobile population. Academic subject content is sufficiently uniform in all States to permit students to move from one part of the country to another without serious problems. This is possible between some States in Vocational Education, but not in others. Length of courses and programs are surprisingly uniform in some States, but differ widely in others. Again, so many changes have taken place in Vocational Education within the past ten years, so much redirection, updating and upgrading, that in virtually every community many instructional programs are quite different from what they were only a few years ago. And the changes have varied from one community to another. Inevitably, the total scene is a hodgepodge of old and new, mostly new. But it changes have been made under local or State direction with little regard for changes of a different nature in the same programs in other States, it is easy to imagine the barriers that have been thrown in the way of Vocational Education students who move from one community or one State to another.

Inequality of opportunity is a problem that Project Baseline has discussed in previous reports. If equality of education in the United States means equal opportunity for students of different ethnic origins to attend the same schools, it may also mean equal opportunity for students of different ethnic origins to attend the same schools, it may also mean equal opportunity for students of different ethnic origins to enroll in the same Vocational Education programs. If the programs in one school are different from those in another, by this reasoning they are not equal. When students in one community or one State are enrolled in programs with lower standards or with inferior equipment than those elsewhere, these students are getting the short end of the stick.

Inequality of opportunity may result from improving and upgrading some programs in some schools while others are allowed to continue on as relics of the past. It is difficult to imagine how a certain amount of this can be avoided, temporarily at least. But there are islands of resistance which have been able to direct the mainstream of change away from themselves. There are States that tend to lag behind the others in moving into new ideas, new programs, and vigorous new methods of bringing programs and students together.

In its simplest form, and probably most widespread, inequality of opportunity in Vocational Education results from limited course offerings. Vocational Education of one kind or another is widely available, as noted earlier, but too often it is limited to a few relatively inexpensive programs. Students in many schools do not have the opportunity to enroll in the courses and programs they may prefer, while students in other schools do. Many States are developing area centers within reach of all high school students, and community colleges or technical institutes are available to most postsecondary students. Even area centers, community colleges, and technical institutes, however, vary in the programs they offer, and it is frequently necessary for students to move to different communities in order to get the kind of skill training they want.

Comprehensive high schools in some States and some communities provide extensive vocational programs to the students fortunate enough to live in such neighborhoods. Students in other high schools can get similar training only in skill centers farther away. And for an unknown number, probably much too large, the vocational programs available anywhere in their own communities have course offerings too limited either to attract their interests or to satisfy their requirements.

Lack of flexibility is generally a characteristic of public education. Teachers have a tendency to repeat the same material year after year, and too often it is what they themselves were taught. The fault may be somewhat overlooked when the subject is history or literature, but skills and knowledge required in Vocational Education are constantly being outdated by new technology. The situation is not as serious as it might be, thanks to the Vocational Education legislation of the 1960s, under which new programs have been established and old programs redirected on a large scale. The problem is still there, however. New programs and redesigned programs in the public school system can become set in concrete after a few years. Vocational Education's use of advisory committees and State supervision by an alert professional staff, as well as the pressure of the employment market, tend to keep this from happening, but in too many cases it happens anyway. Continual evaluation, feedback from graduates and employers, and research and development may help avoid too much rigid obsolescence, but it is a condition that exists in far too many local school programs. If any leveling off of expansion or curtailment of research at the national and State level does occur in the years ahead, this problem will undoubtedly become worse.

Public education's fixed-term scheduling system has also created a problem of rigidity for Vocational Education. It does not take as long to train people for some kinds of skilled employment as for others. Some flexibility is achieved by adding or reducing semesters, but only in eighteen-week or similar blocks of time. Many students could advance at a more repid pace than others if the school system made it possible to do so. Other students, by taking a few more weeks in a program, could achieve satisfactory competence levels, but instead are forced either to repeat entire courses or abandon their training at the end of a school term. A proposed solution is individualized instruction, and it is receiving a great deal of attention in educational theory and practice. A few excellent programs have been developed and more may be expected. Last year the National Association of State Directors of Vocational Education adopted a resolution supporting this kind of flexibility. Until it is accomplished on a broad scale, skill training in the schools is locked into an arbitrary timetable totally unrelated to the real world.

Supervised work experience is one of the most important relationships to the real world that Vocational Education has been able to build into its programs. Cooperative programs have proved highly successful, but their establishment has lagged far behind their potential. Some schools have organized literally all the vocational programs in the curriculum as cooperative programs. Most schools have one or two, usually in distributive education, office education, or trades and industry.

Admittedly, the arrangements between schools and large numbers of employers, for this kind of relationshio in a wide range of occupations, require time and effort and special ability on the part of school personnel. Many vocational educators, nevertheless, feel that without work experience skill training for employment inevitably is incomplete and inadequate. Baseline reports have called attention repeatedly to the low percentages of enrollments in cooperative programs and the exceedingly slow rate at which this situation seems to change. Education generally in the United States is now becoming more career-oriented than it has been in the past, and Vocational Education has offered a natural vehicle for such a trend. But if Vocational Education is to be limited largely to classrooms and shops, its leadership will be limited and questionable.

The most serious result of the present lag in expanding cooperative programs is that students are denied many of the most essential elements in their preparation for employment. Relationships with employers and other employees, attitudes toward work, dependability, initiative and production as taught in a classroom are never as real as they are on a job. The world of work is often not as neatly structured, nor structured in the same way, as a program in school. Without the actual experience of working for an employer, the gap between education and the world of work can not be bridged. And until Vocational Education does bridge that gap for each of its students, it fails to carry out completely the role that it can and should perform in the schools.

Planning and management of resources is probably the area in which Vocational Education is now weakest, the Baseline staff believes. This is true in many States as well as at the Federal level. The planning process has been largely a ritual prescribed by the Federal Government, and it has been based on inadequate information about existing programs and employment market needs. State plans usually bear little relationship to actual development in current or previous years. They have been limited until now by unpredictable Federal appropriations, and State planners usually underestimate needs in order to have them balanced by the amount of money they expect to have available.

In some cases State plans are simply the sum total of local school district plans. This is local autonomy but hardly State planning unless the local plans are developed in concert under State coordination, as is done in at least one case. There is some evidence that Vocational Education has expanded in ways that were intended to meet the needs of students and employers, but there are greater indications that it has simply expanded and found students and employers ready for it. There is very little evidence that particular target populations -- the disadvantaged, women and concentrations of ethnic minorities -- have received much attention in State planning.

Vocational Education management at every level -- Federal, State, and local -- suffers from a combination of inadequate data and inadequate planning. They go together. In the science of management this relationship is gaining general recognition through Management by Objectives (MBO). A few States are moving in the direction of MBO, but most merely give lip service to the concept. From a growing body of literature on the subject beginning in the mid-1960s, experts are pretty well agreed that MBO includes four basic steps:

1. Set a specific objective and lock it into a specific deadline.
2. Plan the activities through which the objective can be reached.
3. Schedule each activity in a sequence necessary to accomplish the objective in time to meet the deadline. This is the actual management plan.
4. Establish evaluation procedures to measure and assess progress.

As long as the nature and content of State plans are dictated by the Federal Government without regard for local circumstances, and the States ignore their own management responsibilities by neglecting to collect and use adequate data, Management by Objectives will remain an empty phrase in Vocational Education. The result can only be poorer programs serving students and employers on a hit-or-miss basis, and probably at a cost to the taxpayer in excess of what it should be. The Vocational Education Amendments of 1976 are intended to change all of this, and they very well might. If they do, it will be because the U.S. Office of Education will no longer prescribe the ritual which has controlled State planning, and because each of the States will take seriously its obligations to develop plans on the basis of reliable data and keep them up to date on the basis of each year's actual performance.

Part I
App. E

Did any of the States have detailed occupational data for females and ethnic minorities in 1974-75?

Yes. Seven States were able to supply enrollment data showing the numbers of females and of each ethnic minority group enrolled in each occupational program identified by the Office of Education codes. They are Arizona, Arkansas, Colorado, Iowa, Kentucky, Maryland, and Oregon. A number of additional States had the data but their computers were not programmed to print out summaries which could be compiled with those from other States. It was then possible for the Baseline staff to group the occupational codes into nineteen clusters so that the kinds of training in which separate groups were enrolled could be more easily identified.[45] Two States were able to supply the same data for disadvantaged and handicapped students. Seven States are in no sense representative of the Nation, and the use of data they have supplied is not intended here to have any validity outside of those particular States. Together, they do constitute one small segment of the Nation which is not geographically limited to any particular section. They are all relatively small States and their combined enrollment in Vocational Education was only 825,543 -- six percent of the national total.

The seven States reported 70,509 Black students in Vocational Education -- 8.5 percent of their total compared with 15.1 percent in all States, They had 12,768 Hispanic students -- 1.5 percent compared with 5.7 percent nationally. American Indian or Alaskan natives numbered 2,980 or 0.4 percent compared with a national percentage of 0.8; and Orientals, 2,200 or 0.7 percent, compared with 1.1 nationally. It is obvious, therefore, that these States are not representative of the Nation in their percentages of ethnic minorities enrolled enrolled in Vocational Education. The number of females enrolled in Vocational Education in the seven States was 440,122, 53.3 percent of the total enrollment; that compares much more closely with 51.7 percent females reported nationally.

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[45] The occupational cluster grouping used here was developed and used in the State of Oregon. Codes not included in the Oregon taxonomy were placed in related clusters by the Baseline staff.

Keeping these facts in mind, and recognizing that certainly the data for ethnic minorities cannot be representative of the Nation, they are still interesting. And they do reveal what is happening in seven specific States. In these States then, the one occupational cluster with more females enrolled than any other was, as might be expected, institutional and home management, which is practically the same as occupational home economics. One-fourth of the females were training in this field for jobs in hotels, motels, homes for the elderly and similar institutional employment. The next two clusters in which a substantial number of females were enrolled were clerical and health occupations, again no surprise. But it is a little surprising that there were as many enrolled in special programs (pre-vocational, remedial, etc.) as in any other training cluster except institutional and home management.

All four ethnic groups follow much the same pattern as females in occupational cluster enrollment except for lower percentages in the health occupations. Clerical, institutional and home management, and special programs have the largest concentrations. The conclusion which immediately suggests itself is that both women and the ethnic minority students in Vocational Education are being placed in low pay or non-training programs in these States, and apparently this is true. It is probably also true that fairly high percentages of the ethnic minority students in Vocational Education in these States are women. They may also be disadvantaged as well, and lack opportunity either to be attracted to or to have the qualifications for entering programs leading to higher salaries. This is what the high percentages in special programs would seem to indicate.

On the other hand, there are sizeable numbers of women enrolled in several clusters that lead to fairly good salaries, although they are usually considered sex-stereotyped -- marketing, secretarial, clothing, and of course the health occupations. The same clusters again find similar percentages of minority students except for health occupations, but even here they are higher than in most other fields. Among other interesting figures: 4.8 percent of the Hispanic students are in food service; 8.4 percent each of the Hispanic and American Indian students are in the mechanical cluster, and 4.5 and 5.8 percent, respectively, of these two minorities are in the metals cluster.

Looking at women in several of the clusters, they account for 45.9 percent of all Vocational Education students in the seven States enrolled in marketing. Keep in mind that they made up 52.6 percent of the total enrollment. Of the students enrolled in health occupations, 80.0 percent were female, as were 58.1 percent of those in food services, 47.3 percent of those in accounting, 71.5 percent of those in clerical, 77.5 percent of those in secretarial, 82.7 percent of those in child care, 89.4 percent of those in clothing, and 83.4 percent of those in institutional and home management.

Clusters	Percent of Total Females and of Each Ethnic Minority Enrolled by Cluster in Seven States				
	Females	Blacks	Hispanic	Am. Indian	Oriental
Agriculture	2.0	5.9	2.3	5.9	2.5
Marketing	3.6	5.1	7.4	4.1	6.3
Health	14.5	7.5	3.9	5.6	6.8
Food Service	1.2	2.0	4.9	2.0	1.3
Accounting	1.8	1.4	1.7	2.1	4.1
Clerical	15.2	19.8	15.5	18.4	20.0
Secretarial	7.6	4.7	5.7	4.9	7.5
Mechanical	0.7	3.9	8.4	8.4	4.5
Construction	0.2	3.3	2.9	4.0	2.5
Electronics	0.2	3.1	2.0	1.9	3.1
Metals	0.2	2.9	4.5	5.8	3.1
Child Care	1.8	1.3	1.5	1.4	0.7
Clothing	5.2	5.5	5.4	2.2	3.3
Institutional and Home Management	26.1	12.5	18.0	11.5	12.7
Drafting	0.2	1.3	0.6	0.9	0.8
Graphics	0.5	1.8	1.4	1.3	1.7
Service	2.4	5.3	4.6	3.9	3.1
Forest Products	0.1	0.4	0.0	0.4	0.1
Unknown	1.0	2.2	0.3	0.8	2.0
Special Programs	15.6	10.2	9.2	14.6	13.4

How many high school students are really enrolled in Vocational Education?

No one knows. Project Baseline is reporting what the State agencies reported which was nearly six million in 1974-75 in forty-one States. If the same percent of total secondary enrollment held true in the other eleven States -- 50.24 percent enrolled in Vocational Education -- there were about seven million altogether.[46] That could be about right, but only if undercounting was balanced by overcounting.

Even if a nationally uniform definition of Vocational Education were used in every State, there would still have been those in programs that fit the definition who were not counted. Federal funds are used to support only part of the local school programs, and some of the other schools have not been reporting their programs and enrollments simply because they have had no good reason to do so. Some of these programs may even lie outside the principal interest of the State vocational agencies. Some of them are identified locally as industrial arts or general business, and no one outside the local schools pays any attention to them.

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[46] Based on the fall of 1974 U.S. total public school enrollment, grades 9-12, of 14,132,000. National Center of Educational Statistics, U.S. Department of Health, Education, and Welfare.

Overcounting in many cases results from the problem of including students in special programs such as remedial and pre-vocational. This can be corrected with a nationally uniform definition if it has no abiguities and cannot be interpreted in different ways by different schools. Overcounting also occurs by adding up every student in every class and then just estimating the number of duplications. This can be corrected only by counting individuals in the local schools instead of class totals. Hopefully, under the new national Vocational Education data system required by law, it will become possible to know how many high school students are being trained for jobs.

What is the difference between Vocational Education and industrial arts?

It depends on how they are counted. Vocational educators say that their programs train students for employment while industrial arts is a general interest or exploratory program. Industrial arts teachers tend to agree when speaking for the record but many of them privately acknowledge that they also train students for employment. The Baseline staff has talked with industrial arts teachers in several States who are actively placing their students in jobs for which they were trained. Entire high schools have been found in which industrial arts programs are offered instead of Vocational Education, using the same curricula, the same equipment, and the same qualifications for their teachers.

The Federal legislation of 1974 made industrial arts a part of Vocational Education, and the Federal rules and regulations which followed maintained the traditional distinction of one program intended for employment and the other not to be employment-oriented. It is a distinction that probably escapes the average layman. Even Members of Congress attempting to legislate in this area are often at a loss to see any real difference. The general public probably neither knows nor cares.

Why, then, raise the question at all? The reason is that industrial arts is a major program in the public schools which is altogether too closely related to Vocational Education either to be ignored or left in confusion. It is almost certain that not all industrial arts enrollments are being reported. No data are being collected on how many former students are employed in the fields for which they were trained or in related fields when they complete their program or graduate or drop out of school. If they have an impact on the employment market, no one knows about it. Vocational Education has chosen to ignore this possibility, and State planning is carried on as though it did not exist.

The number of students being trained for employment in industrial arts may be relatively small. The number who use the skills they acquire in industrial arts courses to get jobs may be small. But in neither case, is the figure much smaller or even as small, for example, as in the training programs administered by the U.S. Department of Labor under the Comprehensive Employment and Training Act. It may be much greater. The only difference, aside from the age of most of the students and the intended purposes of these two programs, is that one costs a great deal more than the other and the Federal Government is paying for it. There is no evidence that the U.S. Department of Labor's training has any more impact on the employment market than industrial arts, if as much.

Is consumer and homemaking really Vocational Education?

Yes. It is easy to take the other side on this question and a great many people do, including some of the most knowledgeable and influential Members of Congress. It is also easy to take a legalistic position and say that consumer and homemaking is Vocational Education because the law says it is. Project Baseline's conclusion is based simply on practice, which admittedly is based on Federal and State statutes but also precedes them. Consumer and homemaking, better known as home economics, has been providing students with the basic skills of home care and management since before anyone cared whether it was vocational or not. It originated as the practical part of a local school's curriculum for girls, as did the "practical arts" programs in shop courses for boys.

There are two concerns about including consumer and homemaking in Vocational Education today. One is that the employment it leads to is not necessarily paid employment. The other is that it may be a means of sidetracking girls away from other programs which do lead to paid employment. In both cases there are overtones of the criticism that Vocational Education is not providing equal opportunity. There is truth in each of these observations. There are also serious doubts that either would be remedied by removing consumer and homemaking from Vocational Education.

In the first place, at least ten percent of all female students in school today will have no other career than that of managing their homes. It might be beneficial for many of them to have other kinds of skill training, if only to fall back on, if they do have to work outside the home. But they probably need both kinds of preparation rather than one or the other. Girls who are preparing for salaried employment, on the other hand, -- and increasingly this is also true of boys as equality of the sexes penetrates family living -- usually will have two careers simultaneously rather than just one. Consumer and homemaking in this sense is a career. Logically, preparation for it is Vocational Education.

Eventually the question is raised: What is Vocational Education and what is not? The only answer, Project Baseline believes, is found in the Vocational Education Act of 1963 and all of the Amendments that have since been added. Vocational Education is not just a list of occupational programs to the exclusion of all others. It is any kind of skill training needed in the employment market which the schools can provide not requiring a baccalaureate degree. In recent years it has come to include a variety of courses and programs which do not ordinarily lead to employment, especially for retired persons. It includes training for voluntary work, of which volunteer fire fighting is one example specifically written into the Federal legislation. It is in this context that the National Association of State Directors of Vocational Education has decided that the definition of Vocational Education means "preparation of individuals for paid or unpaid employment," and that is the definition which Congress has written into law in the Education Amendments of 1976.[47]

The question need not even be raised about consumer and homemaking except for a certain amount of schizophrenia on the subject among educators, especially vocational educators. It seems to the author of this report that too much lip service is given to the continued acceptance of consumer and homemaking by many vocational educators who believe it has really outlived its usefulness. Project Baseline disagrees. Courses and programs must change with the changing skills and knowledge required, as in all Vocational Education, and this is being done in a great many cases. Possibly it is not being done to the extent that it should be or by enough of the local schools. There should be just as much attention directed here by Federal, State, and local agencies -- and by the public -- as to any other vocational program.

Does Vocational Education do anything for students besides train them for employment?

Most people would probably agree that it does, but the State and Federal Vocational Education agencies seem either to be unsure, confused, or indifferent. It seems to the Baseline staff from its own observations and occasional research by others that additional benefits are evident. If true, Vocational Education should recognize the fact -- not to enlarge its self-esteem, but to measure the results of its programs. To a considerable extent, Congress and the U.S. Office of Education have locked Vocational Education into a single-product concept, but vocational educators and administrators have let it happen. They should no longer accept that situation if they know it is invalid.

Where is the research to really find out? Where is the documentation of vocational teachers who say their students learn self-confidence, communication skills, work attitudes, and how to get along with employers and other employees? Where are the follow-up studies that list other benefits than job placement from Vocational Education programs? Many students do not go into the fields for which they were trained, or even into related fields. Did they waste their time taking Vocational Education? Were the Vocational Education funds used to pay for their training wasted?

This is one of the most consistently ignored gaps in public knowledge about Vocational Education. It is not the fault of just vocational educators. All educators, and especially educational researchers, should be probing the possibilities of improving learning for all students through Vocational Education. Many individual vocational educators have been convinced for years that employment-related training programs in the schools improve communication and mathematic basic skills. This could be conclusively demonstrated or disproved through longitudinal research involving pre-tests and post-tests of matched groups of students in Vocational Education and in non-vocational programs. With the Nation's growing concern over basic skills, why is this kind of research being neglected?

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[47] PL 94-482, Sec. 195 (1).

The neglect is primarily the responsibility of Vocational Education. Too much emphasis has been placed solely on job placement. This is not what education is all about, and vocational educators know it. In practice the great majority of them are engaged just as much in preparing students for successful lives as other educators are. It is in what they say they are doing, and the image they have projected of job training as something isolated from the rest of education, that they do a disservice to themselves and their profession.

How much duplication is there between Manpower Training under CETA and Vocational Education?

Very little, for the simple reason that manpower programs for the most part are not training programs. Baseline reports contained reasonably comparable data about Vocational Education and Manpower Training for three years, then discontinued the manpower tables because those data were no longer available. There was a downward trend in the number of persons being trained, however, which does not appear to have been reversed. A total of 374,400 persons were reported as having been enrolled in classroom or on-the-job training in FY 1976 under the Comprehensive Employment and Training Act (CETA). Some of them were in remedial or low skill programs. If even the entire number had been receiving occupationally identifiable skill training, it represented only 2.4 percent of the number of students enrolled in Vocational Education during the same year. Duplication and overlapping, if it does occur, can only be on a scale of fractional significance.

Project Baseline has made this point each year for several years on the basis of the best data available. Probably there is a continuing role for some training under CETA, especially in semi-skilled occupations and for individuals who cannot fit into vocational programs. It is encouraging to note, however, the extent to which Vocational Education and CETA apparently are working toward a coordinated relationship. Vocational Education is doing what it does best, training persons for skilled employment, and CETA is doing what it does best, providing support services and temporary public service employment. The relationship is not yet fully developed, but with the kind of action taken by Congress in earmarking five percent of CETA funds to the States for Vocational Education, it is progressing.

CHAPTER V

A LOOK AHEAD

It has been thirteen years since Congress passed the Vocational Education Act of 1963. It is unlikely that as much change or as much growth will take place in the next thirteen years, but it might. The pressures for continued development are several. Almost everyone in the field is agreed that Vocational Education is still serving only a fraction of the population needing employment skills. Another thirty percent of the high school population enrolled in Vocational Education, bringing it up to eighty, would mean 4¼ million more students at that level. At the post-secondary level even greater expansion may be needed, and some observers feel that in adult programs Vocational Education has only reached the tip of the iceberg.

There are similar pressures for continued change, redirection, reform, updating and upgrading. As more data become available on separate program results and on competencies achieved by different kinds of students in different locations and under a variety of circumstances, the need for additional changes of all kinds will probably become increasingly evident. Vocational teacher education alone may be faced with drastic overhaul if the methodology and course content, and even the quality of work experience traditionally required for certification, are found not to have the assumed relationship with student competence and success. Changes made in teacher education would not exactly ripple down through the entire system; they would shake it to its foundations.

But there are also pressures working against continued expansion and change in Vocational Education, notably two -- cost and the educational establishment.

Federal, State, and local expenditures for more public services of any kind are meeting much stronger resistence today than was true ten or fifteen years ago. The Nation's economy has had some rough sledding in recent years and there is no feeling of comfort or assurance about the future. Educational costs are at an all-time high, while enrollments are leveling off or declining. Most people just don't think the money is going to be available to bring about very much more development and redirection in Vocational Education.

The other pressure against further development on the scale of the past decade is the educational establishment itself. Embedded deep in the thinking of all educators, consciously or unconsciously, are courses and curricula, methodology and school terms, certification and credentialing, local traditions and State prerogatives, ideas about class size, facilities required, location of equipment, even limitations on the number and kind of students to be admitted to a program. Simply because educators, especially vocational educators, have participated in so much change and expansion in the past few years does not mean it will be easier for them to continue to do so in the future. It could mean, instead, that they need time now to settle down a little, to restore a kind of status quo that offers stability.

So, what does the future look like? Project Baseline has assembled the views of a number of individuals who are in a better position to know than most vocational educators or the general public. They include State Directors, U.S. Office of Education officials, National Advisory Council members, university professors, Congressional experts, and persons prominent in the American Vocational Association. As a group they are cautious in their outlook. Individually there are some noticeably different points of view but probably more agreement than disagreement. They all recognize that there are too many unknown elements, too many things that can happen, for them to have a great deal of confidence in their predictions. They are aware of a variety of problems Vocational Education will face in the next ten to fifteen years in attempting to meet the Nation's need for continued expansion and continued improvement.

Vocational Programs in the Schools

There was general agreement that current trends toward a closer relationship between education for employment and academic education will continue. Congressman Al Quie, ranking minority member of the House Commettee on Education and Labor -- and one of the principal architects of Vocational Education bills in Congress -- has as a goal a comprehensive education available to all students in which they can enroll simultaneously in skill training and unrelated academic programs. "Eventually Vocational Education should be a component of a total career education," he says. "There should be nothing wrong with a person learning to be a welder and a poet, but right now if you want to study poetry you would go to a different school then you would for welding. You should be able to pursue both of those -- your occupation and your avocation -- at the same time."

J. R. Cullison, former Director of Vocational Education in Arizona and for many years a leading advocate of reform and modernization, believes the Nation is moving in that direction. There will be more emphasis, he says, on "teaching the whole student" rather than only providing saleable skills. And he sees career education as the vehicle through which this will come about. "Career education is helping to orient all youth to the world of work." Vocational Education and career education together, Mr. Cullison says, will benefit both students and society in many ways. One of them will be to place more emphasis on the importance of good work habits, "and the importance of a good day's work for a day's wages, the importance of free enterprise and the profit motive."

Dr. Robert Van Tries, State Director of Vocational Education in Minnesota, agrees that Vocational Education and academic education are moving closer together. "I think that the way things are going there's going to be an accommodation of the general academic education program and the vocational program. I think that accomodation is going to come about through a change in the total educational structure."

Dr. William Pierce, Deputy Commissioner for Adult and Occupational Education in the U. S. Office of Education, says something similar, but expands the idea to a community wide learning program. "You are going to see the organizational structure of schools change. You are going to see education more of a community activity than something that takes place in this narrow vacuum called a school. When that happens you are going to see a blurring of the lines between Vocational Education and community education."

Dr. Melvin Barlow, Professor of Vocational Education at UCLA, has been closely involved with the development of the Federal legislation of the '60s and '70s as a professional researcher and writer. He shares the interest in bringing Vocational Education and academic education into a closer relationship but is less optimistic about it happening without a great deal more effort. He was asked if he was satisfied with the progress made. "No, I guess I'm not satisfied, but I think a person is pretty naive if he believes that teachers of other subjects are jumping up and down to cooperate with Vocational Education. I think they could care less whether or not they cooperate with Vocational Education."

Dr. Duane Lund, a two-term member of the National Advisory Council on Vocational Education and Superintendent of Schools in Staples, Minnesota, is widely respected among vocational educators, and he has some doubts about the whole idea. He believes the dichotomy between Vocational Education and academic education is decreasing, but adds, "I'm not sure that's progress. It's not something I worry about personally. It's a laudable objective, I suppose. I have inward fears that if you merge them, both of them would suffer. There is danger in dilution. I don't really know it it's justified."

Dr. Lund believes, probably with most vocational educators and a great many non-vocational educators, that an accommodation is being made. "I know there is, of course, an enmity between the academic and the vocational. And yet I think we have learned over the years to work together more closely."

One of the major goals of the legislation of the 1960s, in addition to ending the dichotomy between academic and Vocational Education, was to develop a career ladder concept in the Nation's schools. The House of Representatives Report accompanying the Amendments of 1968 used these words to describe what Congress had in mind:

> Occupational preparation should become more specific in the high school [than in grades 7-9], though not limited to only one vocation. Instruction should not be overly narrow, but, instead, should be built around significant families of occupations or industries which promise expanding opportunities. Thus, a student can leave the program with a saleable skill but is challenged to pursue post-secondary education. Occupational education should be based on a spiral curriculum which treats concepts at higher and higher levels of complexity as the student moves through the program. Vocational preparation should be used to make academic education concrete and understandable, and academic education should point up the vocational implications of all education.[48]

The report also stated: "Vocational Education should be developmental, not terminal, providing maximum options for students to go on to college, pursue post-secondary vocational and technical training, or find employment." It is the developmental feature of Vocational Education which is expected to be one of its most important characteristics in the years ahead. It is closely related to the idea that persons of all ages will be coming back to the schools in increasing numbers for more education and training, or for training in new occupations. Dr. Pierce in the U. S. Office of Education is convinced that this will be taking place on a large scale in the next couple of decades. "I predict," he says, "that we are going to spend more and more money, more resources, more time and energy providing occupational skills at the post-secondary level. You are going to see community colleges' and technical institutions' enrollments grow and grow and grow. The idea of life-long learning will begin to make an impact within the next ten to fifteen years."

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[48] House Report on H.R. 18366, 1968, p.3.

Dr. Van Tries in Minnesota agrees. "We're going to find that this continuing education, this cradle-to-grave education, is going to become a reality." Project Baseline found a concensus among most of those with whom discussions were held that education generally and Vocational Education particularly were moving in that direction. But a rather strong concern was also expressed that Vocational Education has not yet really accepted its responsibility to the adult population. There is an implication in this concern that what many observers see as a dominant trend in the future has serious problems to be overcome first.

Dr. Mary Ellis, a past President of the American Vocational Education Association and widely respected vocational and manpower research administrator, states it very frankly: "I think we have a serious problem in accommodating the older people in Vocational Education. The adult programs, given the opportunities, would probably be ten, fifteen, twenty times the size they are now." One of the major obstacles she sees is the rigidity of the public school system. "We've got to get out of this lock-step business of having school only a semester or a year."

Dr. Pierce is equally convinced that Vocational Education has not yet gotten down to serious business in serving the adult population. "All the data, all the studies indicate to us that we have done a dismal job of providing Vocational Education services at the post-secondary level. And we have done an even worse job in providing those services to adults." One of the reasons, as he sees it, is the Federal Government's policy of splitting its resources for training between two agencies, the U.S. Department of Health, Education and Welfare, and the U.S. Department of Labor.

What has happened, Dr. Pierce feels, is that under the Manpower Development and Training Act (MDTA) and now under the Comprehensive Employment and Training Act (CETA), responsibility for training the unemployed has been given to these U.S. Department of Labor programs along with substantial resources. It has caused Vocational Education to "walk away from the unemployed youth and adults in this country." He feels quite strongly that the situation has to be corrected.

"We simply cannot tolerate fifty percent unemployment rates in some parts of our country. We cannot tolerate thirteen, fourteen, fifteen percent unemployment rates across the board without Vocational Education somehow responding to that problem. Just finding a job is not the solution. Just putting people on dead-end public service jobs for one year without providing them with new skills is not facing the problem."

Dr. Gordon Swanson is one of the intellectual as well as action leaders in Vocational Education and has been for many years. He is a professor of Vocational Education at the University of Minnesota, president-elect of the American Vocational Association, and is known internationally as a researcher. His views are interesting for two reasons: He agrees completely with the need but sees another obstacle in the way of meeting it; and he has a concept of retraining that is significantly broader than anyone else has described.

When asked if he felt that more of the resources of Vocational Education should be concentrated on the older age groups, he replied, "I don't think there's any question about it. I think the credibility of Vocational Education over the next decade or two is going to be determined almost entirely on its ability to work with the entire age continuum of the labor force. If Vocational Education claims to have anything at all to do with the labor force, then it seems to me that it has to do this. And it's not doing it now." The primary reason it is not being done, he says, is that State matching money is money that has been appropriated for secondary and post-secondary education to be used by the local institutions, and "they organize themselves for schools, not education."

Dr. Swanson believes that an increasing emphasis in the future should be on adults, all adults, continuing their education throughout their lives. "I'd like in this country for us to accept the idea that retraining can take on a number of goals including productivity and greater satisfaction, and greater total output including the output that comes from satisfaction."

Another element of Vocational Education that some observers believe is going to accelerate in the next decade or two is work experience. Mr. Cullison in Arizona believes the co-op programs will be expanded. "There is a national movement underway by the National Manpower Institute," he says, "to do this through Work Education Councils in a combination of Vocational Education co-op and apprenticeship programs." It is, in Mr. Cullison's opinion, "a very significant development to help youth make the transition from school to work."

The record of the past decade, however, dampens any real optimism that work experience programs are going to expand as much as they should. Dr. Barlow at UCLA says, "I think it's the one program we can show great benefits from in Vocational Education." But he sees one difficult problem, "A co-op program has to have a lot of supervision, and I think that's probably the drawback. Some school districts are reluctant to set up the extra supervision a co-op program needs."

Dr. Pierce in the U.S. Office of Education sees another problem. Work stations are not always located where students can use them. This is especially true, he says, of rural and small town schools. "We talk a lot about work and education and work experience. What kind of service can be provided to a young person in a town of 3,500?"

Mr. Cullison believes it can be done, but will take effort and leadership. "It's a matter of interpreting the program to the mothers and fathers and educators and taxpayers and legislatures and people who are in the policy-making positions. It's something that will have to be initiated by the States, teachers in each of the States, and ultimately by the local policy makers."

Teacher training is an essential factor in the growth and development of Vocational Education in the next decade. It has not been entirely overlooked in the past, but there are many who feel it has suffered from what might be called "benign neglect." This includes quality as well as quantity. Dr. Swanson has been one of those who have repeatedly voiced their concern, and he ties the outlook for the future to this problem. "I think that both Manpower programs and Vocational Education are kind of ad hoc-ing their way as far as their training is concerned," he says, "and in their instructor training programs almost completely ad hoc-ing their way."

Dr. Swanson sees little help, so far, coming from Congress. "There's no relief in the new legislation. It is presumed, I think, that if an instructor is given a fair-sized load of pedagogical training, and if at the same time he has some industry experience, he is as good as any other instructor."

Enrollments

When Dr. Ellis was asked where she thought Vocational Education would be in ten to fifteen years in terms of enrollment, she said, "I would guess that the size of the program would be doubled easily, probably quadrupled. I think we've reached the point in education in our country where people are beginning to see Vocational Education in terms of more than an automobile mechanic. We've got to have fundamental underpinnings to make this country operate. Not everybody needs a bachelor's degree, and even those with a bachelor's degree may be going back into Vocational Education courses and programs for employment purposes."

Dr. Sar A. Levitan is Director of the Center for Manpower Policy Studies at The George Washington University, and one of the Nation's leading manpower economists. He says that if the U.S. Department of Labor's projections are correct, "it is not likely that the economy will be able to generate enough so-called 'college required' jobs for almost a million new college graduates every year and some 600,000 persons with one to three years of college education."[49]

But this in itself will not mean an increased enrollment in Vocational Education and, in fact, Dr. Levitan sees it creating even another problem.

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[49] Sar A. Levitan, "An Economist's (Solicited and Surprisingly) Cheerful Message to Vocational Educators," a presentation at the National Bicentennial Conference on Vocational Education, Minneapolis, Minnesota, October 11, 1976.

"In some cases Vocational Education graduates would have to compete with youths and young adults considered to be better 'qualified' because they have completed some years of college or have even attained bachelor's degrees. It is more likely that many of the college-educated, in order to find their niche in the work force, will displace lesser educated workers who are trained by vocational institutions."

Even the college-educated may require Vocational Education to get those jobs, as Dr. Ellis suggests. Charles Radcliffe, Minority Counsel for the House Committee on Education and Labor, bases his predictions for expanded enrollments on the assumption that many of them will. "Over the next decade only nineteen percent of all jobs available will require traditional baccalaureate degrees." He was asked if that meant that eighty percent of the kids in school today are going to need some kind of Vocational Education. "Absolutely," he replied.

Given the situation as it is, Mr. Radcliffe was asked how many he thought would really get that kind of training. "I would say sixty-five to seventy percent. I think that in ten years there's going to be a more realistically healthy feeling about the importance of work and what people do for a living."

Financial Support

Dr. Swanson at the University of Minnesota does not question the need for expanding Vocational Education enrollments in the next decade, but he does question the availability of the resources to do so. "It depends on the nature of appropriations, and that," he adds, "is determined by the Nation's priorities." He feels that Federal and State appropriations for Vocational Education today reflect a very low priority. He thinks that Federal support particularly "is still at a minimum level. Our total Federal appropriation for Vocational Education is approximately twenty percent of our Federal appropriation for foreign aid. Now that tells you a little bit about our Federal priorities."

When it comes down to whether the Federal Government or the States should pay for more Vocational Education, Dr. Lund on the National Advisory Council feels that it should be the Federal Government. "The States," he says, "have such high taxes for education now that there isn't very much more they can do. They have done so much for education, and I just think we're at that point where it's hard to ask people for more. It's easier to raise Federal dollars on a national level. Right or wrong, it's easier to do. If we're going to grow, we're going to have to have some Federal dollars to do it."

Dr. Ellis agrees. "I think there has to be a central source for funding and the easiest source to point to is Federal legislation." She is too realistic to believe that this is where the money will come from to double or quadruple Vocational Education enrollments in the next decade. "I doubt that we're going to see a doubling of Federal dollars. We might see a doubling of State and local dollars." In this Dr. Ellis disagrees with Dr.Lund in his feeling that the States can't do it.

Dr. Pierce in the U.S. Office of Education has come rather reluctantly to the conclusion that the money is just not to be found at the Federal level. "I used to think that the Federal Government was going to have to provide all the resources. Given the state of the economy and the state of the Federal Government, I have become a convert. I guess I've got to believe that the States and local schools must provide a major share of the resources."

Congressman Quie tends to agree, but feels that the Federal share of the cost must at least keep up with inflation and "new concepts that cost money. If the Federal Government doesn't do this much," he says, "it will appear that the Federal Government is no longer interested in Vocational Education."

Maybe money isn't the answer, suggested two of those interviewed by Project Baseline. One of them, Dr. Melvin Barlow, says "I don't think the schools always need more money; they need to readjust their resources." He told of visiting one school where the superintendent was particularly proud of the music department. Dr. Barlow's comment to the superintendent was: "You told me you had the best band in the country. When you got down to the industrial arts area you didn't even know what was going on." He added, "If the school board takes the policy that 'We're going to have the best band in the country,' they're going to put their resources where they get the best band."

Mr. Radcliffe was the other person who advanced this point of view. "Actually," he said, "the United States spends more of the gross national product for education than any major nation in the world. I think the money is not going to have to come from increasing expenditures, but shifting them."

They may well be right. It will be a drastic solution if it comes to that, because other educators are not standing in line waiting to have their expenditures cut in order to increase those for Vocational Education. Not a single person Project Baseline talked with had a solution that was any easier. Those who said the Federal Government should bear the cost of continued expansion were anything but optimistic that this would happen. Those who felt the burden must rest on the States and local school district were no more hopeful.

It may be that Vocational Education has reached a critical crossroads in its effort to serve the need for skill training today and in the next decade. If it solves its financial support problem, enrollment growth will no doubt continue the strong surge upward. If it does not, Project Baseline believes, either of two things will happen. Enrollment growth in the next decade will level off far below the Nation's need for skilled manpower; or the enrollment reported will become increasingly meaningless as it represents education about jobs instead of education for jobs.

The Federal Role

The role of the Federal Government has drastically changed since the years of the Smith-Hughes Act, when it established policies, controlled the structure, regulated the programs, and paid for much of the operation of

Vocational Education in the States and local schools. As programs and enrollments have multiplied, the Federal share of support has declined. There are not many who feel that it will do anything but continue to decline. Federal policies are no longer binding on a great many programs in the schools, because they receive no Federal support. Even Federal reporting encounters increasing resistance among local school administrators. What, then, will be the Federal role in the years ahead?

Congressman Quie is convinced that Federal leadership must be continued. "I think in Vocational Education we will always have the Federal stimulus there, since it's important to the Federal Government and the whole national interest that people in this country have occupational skills, and that they have the skills for present-day occupations."

Dr. Pierce in the U.S. Office of Education gives a clear expression to what many others have felt for a long time. "I believe that the Federal Government's role," he says, "is to provide that catalytic money that keeps the program moving and keeps it making the appropriate changes so the quality of the program remains high."

Dr. Ellis agrees, and describes how she feels it can be done. "I think we must have adequate funds for research so we can study and know what it is we ought to be doing, what it is that we're doing incorrectly, and how we can improve. When I talk about research I'm talking about support for planning, programs, any way you want to cut it. We've got to have provisions for curriculum development. Don't think we can use a 1968 curriculum in 1976 and get away with it. I think we ought to have the kind of information that will tell us the kinds of programs we ought to have so that we are current and up to date and the people who are leaving are able to get jobs, maintain those jobs, advance in those jobs.

"Along with that, it seems to me," Dr. Ellis added, "we've got to start looking at our teacher education programs. I think we need major reforms in teacher education." She feels that the money to do these things should come from the Federal Government, providing "substantial sums in these areas for reform and updating and upgrading. And I think probably earmarked for just those purposes."

Mary Allen Jolly is a former U.S. Office of Education staff member and spent a number of years with the American Vocational Association. She is now Director of Public Affairs at the American Home Economics Association, and another one of those professionals held in the highest respect by vocational educators of all kinds. The Federal role must include both research and communications, she feels. "One of the things that needs to happen is to have a better research and outreach system than we have. That needs desparately to be strengthened."

She thinks that one of the means of doing so is already in place. "The research coordinating units at the State level are the only arm of education that I know of that has any way to get to the teachers and to reach people at the grassroots level. But they need some better feed-in; we need a national center or centers that can do this." Her mention of a national center referred to a provision before Congress at the time to set up such a center, and since included in the recently enacted Vocational Education Amendments of 1976.

Dr. Swanson at the University of Minnesota feels that the Federal role should encompass research, knowledge, and a better data base. "I think the Federal Government can serve as a kind of beacon that authorizes the development of new knowledge and methods of planning -- which allows State and local communities to do things that they couldn't do before, or do things better than they're doing now. I think there's a need to generate a new base of knowledge, or a constantly renewing base of knowledge, for the field of Vocational Education and training. I think that our attitude in the past has been to assume that we know enough; just give us more money to operate programs."

Mr. Radcliffe also feels that research should be a major part of continuing national leadership, and he expressed in his own words from his own thoughts what the Federal role in Vocational Education may be for many years. "I've seen a lot of these programs in operation over the years, talked to an awful lot of students, which I think is constructive. I think we are now in a position where we ought to concentrate first of all on the level of financial support. Then, secondly, assure the continuation of research and development. This can only be done by national leadership."

And with that, Mr. Radcliffe adds a final observation. "Maybe we have done all that we can do in terms of Federal legislation. Maybe it's a matter now of fine tuning and encouraging the process."

A Philosophy of Vocational Education

In retrospect, perhaps no area of American education has experienced so much redirection, restructuring, and volatile expansion in such a short period at any time in the Nation's history. Looking ahead, no area may be called on for so much continued change and growth in the next ten to fifteen years. When it began, Vocational Education had a philosophy deeply rooted in the traditions of the past. Vocational educators have clung to that philosophy without realizing that it may have been wrenched out of its familiar assumptions and logical patterns by the impact of new purposes, new programs, new target populations, new products, new relationships with academic education, and millions of new students.

Dr. Ellis, who has given more than passing thought to this possibility, says one of the problems of the profession is that different people see it as having different purposes and different functions. "We have different people viewing Vocational Education, actually operating Vocational Education programs, with different philosophies. What we ought to do is have a very, very extensive study of what the philosophy of Vocational Education is, the principles of Vocational Education, so that we know what it is about and where we're headed."

Dr. Barlow at UCLA does not feel that there has been any fundamental change. "It's my feeling that all the basic principles of Vocational Education were determined, enunciated, defined during the period of 1906 to

1917. It's also my feeling that we haven't discovered any new ones. The whole system of Vocational Education is based on three elements. First, a group of principles or foundations, our underlying themes, our basic issues, which define Vocational Education. These do not change. They stay the same.

"Second, in order to account for change you have to interpret these principles from time to time in accord with social, economic, and technological changes. This we have done primarily in Federal legislation -- 1917, 1929, 1934, 1936, 1946, 1963, 1968, 1976. They are all interpretations, because the principles of Vocational Education are the same."

The third element is implementation -- making the new interpretations of the program work.

It may be a problem of keeping up with the new interpretations Dr. Barlow refers to, or it may be the snowballing effect of those new interpretations, especially in the Act of 1963, but where Vocational Education finds itself now and where it is going in terms of a set of principles is no longer clear to many of its practitioners. One person especially has made this one of his major concerns for the past several years. Dr. Charles Law, State Director of Vocational Education in North Carolina, called for a national discussion of the philosophy of Vocational Education two years ago in a challenging presentation to the National Association of State Directors. He was appointed chairman of a committee of the National Association to develop a statement of philosophy, and he has been speaking publicly on the issue since then.

"I see Vocational Education as an educational function which can revitalize all of education," he says. Dr. Law visualizes the learning process as a continuum from the concrete to the abstract, and Vocational Education serves the purposes of moving a student accordingly. Using automobile mechanics as an example, he says instruction and learning can move "from the automobile to the systems laboratory, to the hydraulics laboratory, to the physics laboratory, and from there to the abstract itself.

"It immediately becomes very difficult," Dr. Law adds, "for anyone to say when Vocational Education starts and when it stops, and that's my point -- I don't want it to stop short of moving an individual student as far into the theoretical as it is possible for that student to go."

Dr. Law does not mean by this that students in automobile mechanics should become physicists, but that automobile mechanics and theoretical physics are both part of the same body of knowledge and should be part of the same instructional process. He says one educator's comment was: "That bothers me because I see you making mechanics out of those who should be physics scholars." But Dr. Law says that is not his intent. He agrees that he has probably stirred up a lot of interest but is not sure what most of it means. He does not feel that he is leading a movement, merely trying to put into words something that is important and that should be happening.

Traditionally the purpose of Vocational Education was tied to society's need for skilled labor, according to what Dr. Law says he was taught, and what several generations of vocational educators accepted as an article of faith. "In essence I was taught that Vocational Education was so greatly needed in 1917 that all the forces of society came together in a groundswell and created the Smith-Hughes Act, and institutionalized Vocational Education.

Dr. Law says that the groundswell of support came from industry because American industry was behind other industrialized nations in skilled manpower. Vocational Education's early supporters and promoters, he says, "were very clear that they did not want education; they wanted training. They wanted it quickly and they wanted it for economic purposes."

"This, of course, does not account for agriculture being a part of Vocational Education, because there was no short supply of agricultural manpower. It got into the vocational program," Dr. Law says, "because it had the political strength in Congress that was needed. An agreement was made in 1914 with the passage of the Smith-Lever Act that involved the National Society for the Promotion of Industrial Education. If the National Society would support the Smith-Lever Act [for agriculture], then in 1917 the reverse would be true [for Vocational Education]. It was a political trade-off, which is fine, no problem."

Dr. Law says that he had always thought the philosophical roots of Vocational Education came from John Dewey. "I learned that we were disciples of John Dewey and to learn by doing was Deweyism. He adds, "I accepted that until I began to read Dewey seriously. As I now read Dewey he was saying the same thing career education is trying to say -- 'learning is doing.' He viewed Vocational Education as a way to completely revitalize all of education, and not only all of education but of American society."

Dr. Law's search for a philosophy of Vocational Education has led him back to where vocational educators had always found a kindred spirit, but now with a different view of what it was all about. He is not alone, as he points out. "Those who have written about Dewey say Dewey ran so deeply that no one has yet really grasped and implemented what he was talking about. I believe that."

Dr. Law says Dewey was talking about the revitalizing of all of our economic and social structures, which most people do not want to discuss. If you tackle John Dewey and implement what he was saying, you not only have to have an upheaval of all of education but totally disassemble and reassemble our American way of doing things. "And," Dr. Law adds, "that's a big ball game to play in. What we ended up doing [in Vocational Education] is to take a smattering of Dewey, a few phrases, and then convince ourselves that we were disciples of Dewey when in reality I think we followed more the doctrine of Charles Prosser. Prosser and others at that time were in the forefront of the push for vocational legislation. Prosser is thought of as the father of Vocational Education, and he is.

"But Prosser did not share Dewey's ideas as I read them. He shared a few of them but certainly not to the degree [that Dewey advocated changing education]. He was not nearly as radical as Dewey. Prosser would not under any circumstances have put Vocational Education with academic education, had he been able to. He made statements to the effect that you can never trust a general educator. We cannot trust anyone other than those of us who know what ought to be done."

Dr. Law feels it was Prosser's influence, combined with the economic purpose of Vocational Education, that has prevented it from developing a more effective role in education. "Prosser wrote the Act [of 1917] and directed the first years of it. In working with the Federal Board of Vocational Education, he made as sure as he could in every statement he could that there were separate boards and separate institutions [at the State and local levels]. He was defeated in that finally, but the result is that though we are under one roof there is no similarity. It has never yet been put together."

The Vocational Education Act of 1963 and especially the Amendments of 1968 were intended to change all this, but Dr. Law does not believe it has happened. "I don't think [the separatism] was defeated," he says "I think it was reinforced. I think we built our walls higher. I think we hid both from ourselves and our critics in '63. I think we hid from them again in '68, and I think we're hiding from them today in '76."

What about career education? Is this what Dewey had in mind, and is this the direction in which we are moving? Dr. Law is skeptical. "Career education as I would like to see it is exactly as I read John Dewey. Dewey was not talking about the single things we talk about. We speak of the surface things like bringing people into the classroom, taking kids out for some work experience. Dewey was talking about using the educational function of Vocational Education to teach everybody through experiential learning."

That is what Dr. Law feels career education should be. He says that when the intent of Congress in 1968 to eliminate the dichotomy between Vocational Education and academic education did not work out, he finally determined to find out why. "Why does it not work out, why can we not articulate, why is it so difficult to blend content, to do what the writers of that Act said we should do?

"I finally realized that I, as a vocational educator, have no way of explaining myself to anyone who is an academic educator." Dr. Law says this is when he began his search for a philosophy of Vocational Education, one from which he could communicate with academic educators. "Vocational Education is inexplicable [to other educators] as long as I talk about the skills we teach. Even the good things -- leadership development, communications, etc. -- [cannot be explained] because we have no common ground on which to stand."

So Dr. Law carried his search back to Dewey. "I think I find the philosophy for Vocational Education today and tomorrow right there. But more importantly I find the philosophy of education. You know," he adds, "it's far beyond a philosophy for Vocational Education anymore. It's the philosophy of survival."

Dr. Law feels that many of the problems in the schools today stem from a tendency in all education to teach content rather than how to learn, answers instead of what questions to ask, surface knowledge rather than the process of acquiring knowledge. And in teaching the process of acquiring knowledge he says "we should lead the youngster or the adult through the specifics to the more and more theoretical -- to the degree that he is able to go. Obviously there are differences in how far an individual may go."

"Allowing for such differences," he says, "this is the way education should function. The use of the hands as a route to the brain began the day my child started opening his or her eyes, and for me to assume that I'm going to change that is contrary to the way he or she learns already. The reason for career education as I understand it, the reason for that hammer and that saw and that ruler in the first grade, is not to say to a youngster, 'you're going to be a carpenter!' The reason is to get hand-eye coordination which is essential to reading, to learning how to read.

"As I see it, Vocational Education has two functions. The first is the function of introducing persons to the concrete, from where they can go to the abstract. The second is to give them a skill, but the skill is the spin-off and not our primary goal. Follow the logic through. I'm an educator first, a vocational educator second, and an ag educator third. The educational function, properly done, can revitalize all of education. John Dewey didn't get it accomplished, and I'm not fool enough to think I could. But to settle for less is not worth the fight."[50]

What are Baseline's recommendations?

Dr. Law's vision of Vocational Education best expresses what a great many others seem to be saying. The goal of revitalization of all education and of all society is perhaps more ambitious than realistic, but goals should be ambitions. Baseline does believe that American education should continue to move in the direction of total union between theory and practice, between the abstract and the practical, between academic content and vocational content -- not among courses in the curriculum but within courses. And Dr. Law may be right that Vocational Education's purpose has been too limited, its concepts too narrow, to be able to do this adequately.

But vocational educators have led the effort and have poured great resources into it. Vocational educators will probably continue to do so. It is time for the rest of the educational community to enter as fully into what must be a common effort. Baseline's recommendations for the future, particularly in view of the shrinking tax resources to support all education, are these:

1. The States and local school districts should concentrate their Vocational Education funds to an increasing extent on paying the start-up

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[50] Interview, Minneapolis, Minnesota, October 11, 1976.

costs of new programs. These are facilities, equipment, initial program support, teacher education, vocational guidance and counseling, and research.

2. State agencies and local schools should take a good hard look at what it really costs to offer Vocational Education compared with other programs. Federal research assistance should be specifically provided for this purpose. Studies of a limited nature have indicated that the added costs for Vocational Education are not as great as is often assumed.

3. If the difference in cost between Vocational Education and academic education is found to be relatively small after start-up costs are provided, and as an adequate choice of Vocational Education programs become available to all persons, the States and the local schools should be increasingly free to use their resources on the basis of what students and parents want. Neither the educational system nor the Federal Government should control educational resources simply to preserve what is no longer wanted or to establish what someone else decides is in the public interest.

This, Baseline believes, will assure the expansion of Vocational Education with only modest increases in categorical support. It will mean, of course, that a shift will probably take place in the use of educational resources from non-vocational to vocational programs. It will not take place if the vocational programs are not there -- thus the need for start-up support. And there will be a continuing need for support to keep programs up to date, for research to solve problems both old and new at every level, and for building an instructional and counseling force capable of making Vocational Education the service it should be to each new generation of students.

When the programs are there and they are current and needed for the world of work, the shift of resources should take place naturally, the result of parents and students making their own choice. This is as a great many people believe it should be.

CHAPTER VI

PROJECT BASELINE

This Volume of Project Baseline's annual report represents a five-year innovation in Federal information service. In 1971 the U.S. Congress, despairing of ever getting the information it needed for intelligent legislation, called on one of its watchdog agencies to take on the job with mandated funds. The National Advisory Council on Vocational Education selected Northern Arizona University to do the work. The U.S. Office of Education made the contract.

It turned out to be a widely cooperative enterprise. The Vocational Education agency in every State was called on to participate, and they all responded. State Advisory Councils have become involved. The U.S. Office of Education, reluctant at first, has been enormously helpful and cooperative. The National Advisory Council on Vocational Education has carried this project as a major activity. Members of Congress and Congressional staff personnel have retained from the beginning their strong interest in the project's success and have given unsparingly of their time and support. A host of vocational educators and other researchers throughout the United States have contributed their services, ideas, constructive criticism and strong support.

What has Baseline contributed?

All Baseline Reports 1972-1975; Appendices F, G

The physical product has been five annual reports, ten supplemental reports, ten reports to Congressional Committees, four published articles, and numerous papers and documents presented to public and professional groups.

The heart of the Baseline product is a system of analysis built over the five years which provides an element of continuity to public knowledge about Vocational Education. This system was initially developed with the aid of Dr. Melvin Barlow at U.C.L.A. and his graduate students. It has since been modified and refined by the Baseline staff on the basis of experience and changes in State data collection. It can be further modified and extended as better data and more adequate collection systems are developed, especially under the new legislation of 1976. It is in place; it is functioning; and it is a development from which increasingly more significant analysis can emerge as data become more adequate.

Five years ago an initial mailing list for the Baseline reports was assembled. It included several officials and staff personnel in each of the State Vocational Education agencies, State Advisory Councils, the U.S. Office of Education, the National Advisory Council on Vocational Education, Members of Congress and Congressional staff personnel. There were about five hundred individuals on that list altogether.

Others have been added each year as the reports became known and copies were requested. Several of the news media have reviewed the annual reports and most of the supplemental reports, resulting each time in a flood of additional requests. In the past four years approximately 7,000 copies of Baseline publications have been requested in addition to an unknown number of requests that have gone to the Educational Research Information Center (ERIC) after published copies were exausted. Baseline's current maling list contains 5,098 names.[51]

State Departments of Education: The largest single category of persons requesting Baseline reports are officials and staff in State education agencies. From an original list of about one hundred fifty, it has grown to 1,346. Project Baseline from the beginning has worked closely with these people, and that joint effort to compile information and make sense out of it on a State-by-State as well as national basis may have been Baseline's biggest contribution to the field. An extensive correspondence has been received from a great many people who administer Vocational Education at the State level.

One State Director writes:

> You will find a red line has been drawn in our copy to lead the eye to this State's data in various tables. We have felt satisfaction whenever our State looks good and we are challenged when it does not. The report that is the most "dog-eared" is the Part One Narrative Report . . . with its excellent graphic and pertinent information. We have used excerpts from this report to good advantage.

Another State Director says:

> To our knowledge, your final report is the single document which presents data in a manner which facilitates comparisons from State to State. The considerable detail is a tremendous aid in determining our relationship to other States. Further, the historical data have been helpful in our forecasting and in the development of our State Plan.

Some States have commented on the fact that Baseline reports contain more current data than the statistical summaries of the U.S. Office of Education. USOE summaries, it should be said, are compiled from the same State sources as those used by Baseline. In fact, Baseline has piggybacked on the established Federal system. But USOE does not make the same effort to assure that the data are accurate and complete, so many of its figures are not final and some are missing. These figures are amended and updated for the Baseline reports. The reason this is possible is that the Baseline staff maintain closer personal relationships with State Directors and their staff than can be done under the more formal and time-consuming procedures of the Federal Government.

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[51] See Appendix G.

The Baseline reports also make extensive use of additional data from other Federal agencies and State sources, as another State Director notes: "The annual Learning a Living Across the Nation volumes have been very valuable in providing national and State summary data on vocational education, much of which is not readily available from any other source."

One of the weaknesses of Vocational Education has been its inability to let the public know what was being accomplished, especially after passage of the 1963 Act. Many States as well as USOE are now using information in the Baseline reports for this purpose, as observed by one of the State Directors in the South: "This data is helpful in public relations, speech preparation, and program management for comparative purposes at the national and regional level."

The Baseline staff in a sense does what fifty-two State agencies need to have done but does it only once without having to duplicate its efforts fifty-two times. This is recognized in virtually every communication received. Typical is the comment from a State Director in the Southwest: "It summarizes in an easy to read format many statistical and financial data elements which are contained in hundreds of reports."

Here are just a few of the ways in which other State department personnel are using the Baseline reports: "We have used the reports in drawing up missions and goals for the Division when preparing the budget request." "Project Baseline has provided valuable information to assist in understanding, planning and developing guidelines at the State level." "We have used the data for annual State planning as well as in direct application with a Part D project grant." "I think that the most outstanding contribution of the project has been to cause the States to take a much closer look at the quality and amount of data which they were able to generate." "By reviewing your publications I feel that we are able to upgrade the service that we provide our handicapped students." "I have come to rely on Project Baseline products as the most rational and comprehensive update of Vocational Education that can be obtained on a national basis."

Universities and Colleges: The second largest number of Baseline users are at universities and four-year colleges, with a total of 1,194 on the mailing list. Many vocational teacher educators have written for multiple copies to be used in both graduate and undergraduate courses. They are being used as required reading in some research courses, as texts in a number of institutions, and as reference material in the great majority of such institutions where Vocational Education or one of its related fields is offered.

A Professor of Vocational Education writes: "I have the reports in small supply for loan to my graduate students. The materials are dog-eared from use. I have also loaned them to professional colleagues for information and reference . . . Once more during the current term we are using all of the reports in my graduate course, Federal Vocational Legislation, and they are a rich resource -- in many cases the only comprehensive and current source."

A policy analyst at the Stanford Research Institute has found the Baseline reports "most useful in my own work," and expresses appreciation "for the cooperation your staff has extended me when I have made telephone requests."

The Graduate Program Supervisor in a State College's Division of Business is very specific: "First, we study the national picture for vocational and career education through your statistical summaries. These data give us an excellent 'handle' on things. Second, we examine your data when we review our curricula in business and distributive education. Third, your reports also provide clues for in-service needs of our educators. We get insight from your efforts for offering workshops and seminars. Fourth, your data are used within our instructional program by professors in their undergraduate and graduate courses."

A Vocational Teacher Education Administrator at another university writes: "I have been an avid reader of these reports over the last year and have utilized them extensively in classroom work, during in-service and pre-service teacher education seminars and work-shops, in assisting local educational agencies with planning for vocational education programs for the future, and in writing and preparing various proposals."

An Associate Professor of career education says that he has "personally used every report I have received in at least one of the following ways: (a) As material for class discussion - facts and figures, trends, programs. This material has been especially useful in our Introductory Course in Vocational Education and our Occupations and Manpower Course; (b) As a source of hard data to support proposals for funding project activities; (c) To obtain answers to specific questions which arise as part of various professional activities, (e.g. a State committee assignment concerning supply and demand of Vocational Teachers)."

It is neither possible nor necessary to list more than a few of the college and university faculty who have written to say that the Baseline reports are filling a need. The following are merely additional examples: "All of the reports have been sent to our library and find use among the college as a whole, but especially by students in our Vocational Education program." "They are being used in our Department of Industrial Education as a research source to be used in developing summer workshops and summer courses for vocational teachers in-service training." "They are of great value as references for undergraduate and graduate students who are enrolled in guidance and counseling programs and courses in career development." "The Project Baseline information has been used to assist in locating data and people for a project titled, 'Cost per Pupil for Vocational Education.'" "I find them most helpful in keeping our staff informed on the information presented and I use the material with my professional classes in teacher preparation." "I have used the information from your publications very extensively in my preparation for keynote speeches and presentations to vocational educators." "More than any comparable studies, Baseline illuminated the need for good data in this field."

Advisory Councils: One of the largest remaining groups using the Baseline reports is members and staff of the State and National Advisory Councils on Vocational Education. There are 282 individuals in this group on the mailing list, up from about seventy four years ago. Baseline has been, of course, a project of the National Advisory Council, although under contract with the U.S. Office of Education. One of the members of the Council, who has served longer than anyone else, describes the results: "Much of the data that the National Advisory Council on Vocational Education has used in its publications and testimony could be traced directly to your reports."

State Advisory Councils have been given statutory responsibilities that can only be carried out with uncontrolled and unbiased information. Most of them have found the Baseline reports helpful in their work. Here are a few examples: "Work done by Project Baseline has brought us a long way down the road to gaining national perspective of Vocational Education while giving the States some basis for comparison." "We realize the monumental task that you have in producing accurate, current and relative statistical data about this very important segment of our society." "We gained some ideas about improving the cooperation between the Council and the Department of Education in the development of the State Plan." "During the past 3½ years we have found the results of your Project Baseline to be of great value as we carry on our Council's mandated responsibility of evaluating Vocational Education activities within the State." "In particular the data contained in the reports has been helpful in preparing annual reports and evaluation."

Other Groups and Organizations: The variety of purposes for which the Baseline reports are being used is extensive. A former staff member of the Senate Education Subcommittee says, "In perusing the reports, I came across statistics which indicated that the States were not using Vocational Education funds in accord with the law. Together with the information that my colleages in the House had gathered, this resulted in the GAO study and report on Vocational Education which later evolved into legislative action."

The AFL - CIO Appalachian Council told the Baseline staff:

> It is not possible to go into detail as required to fully express the assistance that your reports have provided this Council. We find the statistical data and the general information incorporated to be of great value and we quote from your reports both in our writings and oral presentations . . . We use your material for considerable reference in preparing programs . . . with our affiliates as it relates to apprenticeship and/or vocational training.

Personnel in the U.S. Office of Education are understandably reluctant to express themselves about the Baseline product especially since there has lingered from the beginning a concern in some quarters over an outside agency performing a function which a few individuals felt should have been done there. But one staff member in a regional office has been refreshingly frank:

As an employee in a Federal regional office I anticipate each Project Baseline report with pleasure and satisfaction. Pleasure is elicited because the report is well-written and lucid; satisfaction, because the facts should be receiving attention and sometimes it takes an outside group to accomplish that.

A cross section of the diverse uses being found for Baseline materials would in itself be quite lengthy, but here are a few of them.

Carnegie Council on Policy Studies in Higher Education:

> It has been helpful for us to have readily accessible, comprehensive data for our forthcoming report on 'Vocational Education and Manpower Training for Post-secondary Youth and Adults.' We have used your data to help select a representative set of States for field visits. We intend to use your reports in assessing trends in the Smith-Hughes program, perhaps the competencies below the baccalaureate. Your observations on data limitations have shortened our search for information which, unfortunately, has not been collected in a consistent fashion.

Channing L. Bete Co., Inc., Publishers of Scriptographic Booklets:

> As a Director of Educational Marketing for a commercial publishing company, one of my responsibilities is to be aware of trends and changes in the educational system. Vocational Education is an important segment of the education market in terms of expenditures and number of students enrolled, and your reports have given me a better understanding of Vocational Education than I otherwise would have had. While Project Baseline may not have originally intended that its reports be used in this manner, I believe this is a legitimate and valuable use for them.

American Vocational Association:

> We have found this information quite helpful at the AVA office. We used it extensively as we dealt with the legislative proposals and I used it from time to time in testimony. Quite frequently this information has been sent to people who call upon the AVA office for information about Vocational Education programs.

American Industrial Arts Association:

> We find it extremely frustrating not having like data to rely upon for the industrial arts field for informational purposes, projections and trend determination.

Acting Director for Employment and Training, National Governor's Conference:

Besides building my general awareness, I was particularly interested in the section on accountability and the cooperation that it calls for and . . . the section dealing with CETA/Voc Ed Coordination.

The National Rural Center:

Your compilation of the various materials on the characteristics of Vocational Education programs of the fifty States saves valuable time and effort that otherwise would be spent in contacting the State divisions to obtain the data. We have used the material in a comparative study on Southern education that is now being published in a report to the Task Force on Southern Rural Development. The material allowed for the formulation of policy recommendations that, we hope, might change and improve Southern Vocational Education.

The National Research Council of the National Academy of Sciences has used "Project Baseline's evaluation (as) one of two large-scale evaluations of R & D that the Committee (on Vocational Education R & D) was able to cite in its report."

Local Schools: In the Baseline mailing list there are six categories of local schools -- community colleges, school districts, secondary schools, technical schools, elementary schools, and trade schools. There are 480 individuals in these schools throughout the United States receiving the Baseline reports because they have heard about them and requested them. They have also found a variety of uses for the information.

An intermediate school district in one State uses the Baseline reports "in providing services to local educational agencies." A research specialist says they are used "in career and occupational education as guidelines and references in planning and developing programs."

The Office of Career Education in a major city school system expresses "the appreciation of this staff for the wealth of information contained in the annual reports on Vocational Education. The national scope of your studies provides us with a reliable basis for comparison as well as much detail which is of value in planning."

The Coordinator of Vocational Programs in a predominately rural school district says he passes the Baseline publications directly on to the district's vocational instructors.

The Director of Student Services at an Area Vocational-Technical School says, "Frequently we will use the type of information you include in your Baseline reports for speaking with groups of parents and educators, comparing our local accomplishments with State and national averages."

Judging from the comments received from schools and school districts, the overriding value of Baseline materials seems to be in coordinating local planning and program development with State and national areas of need. From a city school district in the Midwest comes a statement heard over and over again in a variety of expressions: The Baseline materials "certainly are of value in determining a national perspective for Vocational Education planning."

Members of Congress: The original request for this study came from Congress, so the critical question is: What has Congress gotten out of it? One answer to that question may be found in the comment of a State Vocational Education official following publication of Volume IV in the Baseline series. "Let me commend the author for a dozen well-presented recommendations in Chapter IV [Part 1]. The legislation currently before Congress speaks in remarkably parallel ways to several of these recommendations." That legislation was passed and signed into law this year, and its parallels with Baseline recommendations will be discussed later. Meanwhile, it is important to look at Congressional actions taken in 1972 and 1974.

When the Higher Education Act of 1972[52] was under consideration, the Baseline study was in its first year of research. The first Baseline report was not available even in draft form to Members of Congress, but a preliminary report was prepared and the Baseline Director was asked to testify in the House and Senate Subcommittee hearings. This legislation attempted to strengthen Vocational Education by creating the present Bureau of Occupational and Adult Education headed by a Deputy Commissioner and adding a number of additional high-level positions. Project Baseline's testimony along with many others had urged a stronger role for Vocational Education in the U.S. Office of Education. Baseline had also recommended an administrative system that could better coordinate Vocational Education with the U.S. Department of Labor's manpower training.

The 1972 Act did something else: It established the National Institute of Education (NIE) to assume more of the educational research responsibilities previously administered by the U.S. Office of Education. The proposal then being considered by Congress contained no references to vocational or career education research. The Baseline Director recommended in a Senate Committee hearing that language be written specifically including this area, because too often there had been a tendency to ignore the employment related side of education. The Committee Chairman agreed and an amendment was adopted which carried out that recommendation. "Education And Work" is now one of the six priority areas of NIE's research.

By the time the Education Amendments of 1974 were under consideration, Project Baseline's first two reports had been published and distributed. In Vol.I a recommendation was made, "That all of the Nation's elementary and secondary schools be encouraged to institute career education for all students, and that Vocational Education be an indispensable and expanding element of career education." Many others were making similar recommendations and a career education movement was already underway, with Education Commissioner Sidney Marland its chief apostle. Baseline's contribution was made in a chapter in Volume I, "New Developments in Vocational Education." in which career education developments in the States were identified.

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[52] PL 92-318.

Career education was made part of the 1974 Act in rather strong language:

> It is the sense of Congress that --
>
> (1) every child should, by the time he has completed secondary school, be prepared for gainful or maximum employment and for full participation in our society according to his or her ability;
>
> (2) it is the obligation of each local educational agency to provide that preparation for all children (including handicapped children and all other children who are educationally disadvantaged) within the school district of such an agency; and
>
> (3) each State and local educational agency should carry out a program of career education which provides every child the widest variety of career education options which are designed to prepare each child for maximum employment and participation in our society according to his or her ability.[53]

In order to carry out these provisions an Office of Career Education headed by a director and a National Advisory Council for Career Education were established. Funds were authorized for grants to States and local education agencies to help them move ahead.

The most serious problem Project Baseline found with Vocational Education during the first year of research was its reporting system. This was discussed with Members of Congress and included in testimony before the Congressional Committees. The first Baseline report contained a recommendation, "That the U.S. Office of Education and Congress begin consideration now of a new National Educational Data System."[54] Volume II included a full chapter describing the situation and analyzing its causes. The recommendation of the year before was repeated with some additional detail.[55] As a result of this and Congress' own experiences, together with similar dissatisfaction generally with the Federal Government's handling of educational information, Congress in 1974 reorganized the National Center of Educational Statistics (NCES). It was upgraded, placed directly under the newly created Assistant Secretary for Education, and given a whole list of new and specific responsibilities.

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[53] Sect. 406 (a), Title IV, P.L. 93-380.

[54] Learning a Living Across the Nation, Vol. I, p. 426.

[55] Ibid, Vol. II, pp. 15-43, 375-6.

One of its new responsibilities was to "assist State and local educational agencies in improving and automating their statistical and data collection activities."[56] The words "and automating" were put in at Baseline's suggestion, because the staff had come to feel that automation -- as contrasted with the manual systems then used by most States was essential for reliable and timely information.

Another concern which Baseline had about an education data system was that it should not be developed solely for the benefit of the agency operating it or for the administrators of Federal educational programs. There had been a proprietary attitude in the U.S. Office of Education before the Baseline study began, and the same proprietary attitude had been found in the U.S. Department of Labor and in some of the State agencies. This had been discussed with Members of Congress and Committee staff personnel. The 1974 legislation dealt with the situation very specifically:

> (A) The Center shall participate with other Federal agencies having a need for educational data in forming a consortium for the purpose of providing direct joint access with such agencies to all educational data received by the Center through automatic processing. The Library of Congress, General Accounting Office, and the Committees on Labor and Public Welfare and Appropriations of the Senate and the Committees on Education and Labor and Appropriations of the House of Representatives shall, for the purposes of this subparagraph, be considered Federal agencies.
>
> (B) The Center shall, in accordance with regulations published for the purpose of this paragraph, provide all interested parties, including public and private agencies and individuals, direct access to data collected by the Center for purpose of research and acquiring statistical information.[57]

By 1976 two more Baseline national reports and nine supplemental reports had been published. Congress had the use of all these data, analyses, conclusions, and recommendations in working on the Education Amendments of 1976. That they were used is clearly evident. Numerous recommendations made by Project Baseline were written into the Act,[58] and while many other organizations and individuals had made some of the same recommendations, the supporting data and analyses were available for the most part only in the Baseline reports.

Congressional expectations that vocational data collection would improve after the National Center for Educational Statistics was strengthened have not been realized. Meanwhile, the Baseline reports focused increasing attention on the problem. The third volume of Learning a Living Across the Nation contained a chapter summarizing three years of experience and making detailed recommendations about what a good system should look like. A special supplemental report was published under the title A Data Base for Vocational Education and Manpower Training. Testimony before the House and Senate Education Subcommittees was based on this report. Volume IV of the Baseline series contained a chapter describing the current status of automated systems in the States.

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[56] Sect. 406 (b), Title V, PL 93-380.

[57] Sect. 406, (f) (2), Title V, PL 93-380.

[58] PL 94-482.

For a complete copy of the Act, see Appendix A.

The response of Congress to all of this is contained in Sec. 161 of the new Act. The Bureau of Occupational and Adult Education, and the National Center for Educational Statistics must "jointly develop information elements and uniform definitions for a national Vocational Education reporting and accounting system." The system must include "information on vocational students, programs, program completers and leavers, staff, facilities, and expenditures." It must be compatible with an "occupational information system" also required in the Act "to meet the needs of the Vocational Education programs and employment and training programs at the national, State, and local levels."[59]

There are three essential features in that provision which Baseline has stressed: Uniform definitions; specific categories of information (students, programs, follow-ups, staff, facilities, and expenditures); and compatibility between Vocational Education data and manpower training data. Baseline has also urged other features which are not included, i.e. the use of non-aggregate data, and building the national system on the foundation already established by many of the States, instead of starting all over reinventing wheels. But these features are not precluded. Congress has given the responsibility of actually designing, implementing, and operating the system to the National Center for Educational Statistics. It is up to that agency now to produce a sound, efficient, and workable system. Project Baseline believes that it can be done by working with the States and using systems already developed by many of them, and by including only a limited number of data elements in units of one -- non-aggregate data.

The National Center for Educational Statistics must also prepare "annual acquisition plans of data for operating this system," and these must be submitted to the Commissioner for his review and comment.[60] It is this provision which allows the Commissioner a voice in the manner in which the data are to be collected each year. It can be extremely important both as a means of maintaining continuity of data collected and close coordination with the data systems developed by Vocational Education agencies in the States. It also offers the Commissioner an opportunity to help guide the transition from the national manual information system in operation now with all of its problems to a fully automated system. The Commissioner, for example, could encourage the National Center for Educational Statistics to allow States merely to submit their data each year on magnetic tape, thus eliminating the use of paper forms, as suggested in Chapter III of this report.

Project Baseline has discussed these suggestions and recommendations many times, both publicly and with Members of Congress and their staff.

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[59] PL 94-482 (a), (b)
[60] PL 94-482 (a) (4).

All of the suggestions are now possible, and they are encouraged under the new legislation. One in particular, Baseline's repeated recommendation to make Vocational Education data fully compatible with other educational and manpower training data and vice versa, has been mandated under the new Act. A National Occupational Information Coordinating Committee is to be established, made up of the Commissioner of Education, the Administrator of the National Center for Educational Statistics, the Commissioner of Labor Statistics, and the Assistant Secretary for Employment and Training. This Committee must develop and implement "an occupational information system to meet the common . . . needs of Vocational Education programs and employment and training programs at the national, State, and local levels."

Each of the States must establish a similar Committee composed of representatives of the State Board for Vocational Education, the State employment security agency, the State Manpower Services Council, and the agency administering the vocational rehabilitation program. The National Committee will receive not less than $3 million nor more than $5 million annually to carry out its responsibilities, and will make funds available to each of the State Committees.

The principal purpose of Baseline's insistance on better data and a better data system has been to make Vocational Education more accountable to Congress and to the public. A second and equally important purpose has been to improve State and local planning. In the 1976 Act Congress has dealt with both, and in doing so has followed lines recommended in the Baseline reports.

One of Baseline's supplemental reports was on the planning process, and one of its conclusions was that the States not only have to have better data of various specific kinds, they have to make use of those data each year in specific ways. Congress has now spelled it out much as Baseline recommended. Baseline also pointed out that one of the major reasons the States could not plan their programs well while following the procedures and using the guidelines prescribed by the Federal Government was that these procedures and guidelines put each State in a strait jacket. This, too, Congress has remedied, by calling for a compliance document separate from the five-year plan and letting the States develop their own planning procedures as long as they include certain specified provisions.

One of the things the State plan must contain is a five-year needs assessment, updated each year, which Baseline has recommended as essential. It must also contain explicit goals to be achieved based on the needs assessment, and these are to be adjusted each year based on actual progress and experience -- another Baseline recommendation. Specific courses and training opportunities to be offered must be listed with their projected enrollments at the institutions and at the levels where they will be taught. All local, State, and Federal funds must be identified in the ways they will be allocated "among these courses and training opportunities, levels of education and institutions within the State."[61]

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[61] PL 94-482, Sec. 107 (1) (2) (A) (iv).

Congress wants even more. In order to show the logic in each plan, States must include their "reasons for choosing these courses and training opportunities, enrollments, allocations of responsibility, and allocations of resources."[62] All of this must be projected through the five-year plan, and then spelled out one year at a time in a series of annual plans, each of which is to reflect what has happened and what has changed during the preceding year. Some of the States may feel that this is more of a strait jacket than they were in under the 1968 planning requirements, but Project Baseline would disagree. All this requires is information the States should have anyway in order to do comprehensive planning, and the use of that information in a logical way.

Congress has also responded to Baseline's and others' concern over accountability by requiring annual evaluations at the Federal and State levels. The Commissioner must submit to Congress "within nine months of the termination of each fiscal year" a report on the status of Vocational Education which includes "data on the information elements developed in the national Vocational Education data reporting and accounting system and an analysis of such data."[63] The Bureau of Occupational and Adult Education must analyze the strengths and weaknesses of programs assisted under the Act in at least ten States each year and the U.S. Department of Health, Education and Labor must conduct fiscal audits of the same programs. A summary of the findings from these Federal reviews and audits must be included in the Commissioner's annual report.

Each State must, in addition, make its own evaluation of the effectiveness of each local educational agency's programs assisted under the Act within the five year period of the State plan. Presumably, one-fifth of the schools in each State would be evaluated each year. A summary of the results must be included in an annual accountability report together with "a description of how the information from these evaluations has been, or is being, used by the State Board to improve its programs." The State accountability reports must also "show explicitly the extent to which the State . . . has achieved the goals of the five year plan," and how Federal, State and local funds have been used in the process.[64] A summary of the State evaluations each year must be included in the Commissioner's annual report to Congress.

Project Baseline has always felt, and has expressly stated to the Congressional Committees, that it is unreasonable for the Federal Government to expect the States to carry out extensive federally required data collecting and reporting activities without specific financial assistance for that purpose. In the 1976 legislation a step in this direction has been taken, although not adequate for what has to be done. An annual appropriation of $25 million is authorized to assist the States in carrying out data collection, planning and reporting requirements, evaluations, and State administration. It is not enough, but it does recognize that the Federal Government has an obligation which it is now beginning to assume.

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[62] PL 94-482, Sec. 107 (b) (2) (B).
[63] PL 94-482, Sec. 112 (c).
[64] PL 94-482, Sec. 108 (b) (2) (B).

Another concern which Project Baseline has had about Vocational Education in the schools, and has discussed in each of its five annual reports including this one, is its failure to recognize other programs in the schools which are not supported by Federal funds but are training students for jobs. This is particularly true of many high school industrial arts programs, and to some extent of general business programs. Planning cannot be realistic while ignoring the enrollments, completions, and placement of students in such programs simply because they fail to meet certain criteria in order to be identified as Vocational Education.

Congress apparently has agreed, and the States will now have to be aware, at least, that there are other programs using State and local funds which are helping to meet the training needs of local communities. Each State's general application for its allotment of Vocational Education funds must contain, among other things, a description of "the relationship between Vocational Education programs proposed to be conducted with funds under this Act and other programs in the area or community which are supported by State and local funds."[65] It is a weak provision and located in the boiler plate section of the State's compliance document rather than in the five-year plan, but that should be no reason for ignoring it. The interest of Congress seems clear, that all publicly supported job training should be known about and taken into consideration in determining what should be done by Vocational Education.

Many vocational educators have felt for some time that Federal funds should be available for support services for economically handicapped students just as they are for the U.S. Department of Labor's manpower trainees. Project Baseline's data have suggested the need for this, particularly when serving unemployed adults, and has recommended such action by Congress. In Sec. 120 of the new Act the purposes for which vocational funds may be used now include stipends for Vocational Education students with acute economic needs, placement services, special support for women in traditionally male programs, and day-care services for children of students in secondary and post-secondary Vocational Education programs.[66]

One of the most seriously neglected areas of Vocational Education development and expansion, according to data collected by Project Baseline, has been teacher education. Vocational guidance and counseling is another. In Vol. IV of the Baseline series both of these needs were discussed, based on the data presented, and recommendations were made to Congress for greatly increased support. Baseline specifically recommended cost-of-living subsidies for pre-service vocational teacher education students, and to some extent this was written into the Act. Sec. 172 provides for fellowships for non-vocational teachers and persons in industry to prepare to teach Vocational Education. The fellowships include stipends, tuition and fees.[67] There is only one problem, and it is a serious one. Funds to support such fellowships must come from the Commissioner's five percent of the basic grants from which so many other activities are supported that it is doubtful if there will be enough money to go around.

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[65] PL 94-482, Sec. 106 (a) (4) (D).
[66] PL 94-482, Sec. 120 (b) (1).
[67] PL 94-482 (c).

Guidance and counseling fared better in the new legislation. Baseline had recommended a separate authorization with substantial funds, and this has been done. Sec. 134 provides that no less than twenty percent of each State's support services grant (which is twenty percent of the total allocation) must be used for guidance and counseling. The funds may be used for supporting vocational guidance and counseling programs, job placement, vocational guidance and counseling personnel training, vocational guidance and counseling in correctional institutions, bilingual vocational guidance and counseling, vocational resource centers, and leadership for vocational guidance and exploration programs at the local level.[68]

Project Baseline has also reported a consistently minimum effort to provide Vocational Education for the handicapped and disadvantaged in the face of a strong national policy to do so. In Vol. IV of the Baseline reports a recommendation was made to change the minimum expenditure requirements to separate authorizations. This was done in the case of disadvantaged students. Sec. 140 authorizes appropriations of $40 million in FY 1979, $45 million in FY 1980, and $50 million for each of the fiscal years 1981 and 1982, for special programs for the disadvantaged.[69] In addition, minimum expenditures of Federal funds are still required -- ten percent of the State's basic grant for handicapped persons, and twenty percent for disadvantaged persons -- but now the States and local districts must match Federal expenditures with equal amounts from their own funds.[70]

In Baseline's first report some data were included which suggested that funds were needed to update and improve Vocational Education facilities and equipment in many schools, especially those in financially hard-pressed inner city districts. A recommendation was made that year for special funds to be authorized by Congress for that purpose. Congress finally did it in the Act of 1976. Authorization of $35 million in FY 1978, increasing each year to $50 million in fiscal years 1981 and 1982, is included to provide assistance to local school districts "which are unable to provide Vocational Education . . . due to the age of their Vocational Education facilities."[71] These funds may be used for remodeling and renovation of existing facilities and equipment, and conversion of academic facilities to Vocational Education.

Finally, there is one purely coincidental similarity between one of Project Baselin's recommendations and the 1976 Amendments. In its 1975 report (Vol. IV) Baseline recommended increasing the authorization for Part B of the Act to $850 million in FY 1978, $1 billion in FY 1979, and an additional $150 million each year thereafter. The Act as finally passed by Congress increases the authorizations for Subparts 2 and 3 (basic grants, program improvement, and supportive services) to $880 million in FY 1978, $1.3 billion in FY 1979, and an additional $150 million totaling $1.18 billion in FY 1980, in FY 1981 $145 million more -- $1.325 billion, and in FY 1982 $160 million more -- $1.485 billion.[72]

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[68] PL 94-134.
[69] PL 94-482, Sec. 140.
[70] PL 94-482, Sec. 110.
[71] PL 94-482, Sec. 191.

Will Baseline services be continued?

At the end of the original four-year contract under which this study has been conducted, it was decided by the U.S. Office of Education and some Members of Congress that the Baseline activities should not come to an end. There appeared to be too much need for its products and services both at the Federal level and in the States to allow them to be discontinued. The U.S. Office of Education expected to establish a national Vocational Education information system to do what Baseline had been doing, but needed another year to get into operation. So it was agreed to extend the Baseline contract another year, the year now ending.

The Baseline staff and the U.S. Office of Education have worked together this year to attempt to bring about a transition of the Baseline data files and information services to the U.S. Office. This effort has not been entirely successful. The Baseline staff suggested a list of eight services to be assumed by the U.S. Office and made eight recommendations for transferring the data files and these essential services.[73] Arrangements have been made to transfer the data files, but apparently Baseline's services of data quality control, reporting, and information dissemination will not be provided for school year 1975-76 as a Government function. The major problem seems to be current staffing and budget restrictions in the U.S. Office of Education, and this is not expected to change in the near future. Moreover, since the new statistics will reflect new definitions and changes in data elements, continuity of Vocational Education reporting will require some kind of bridging from those previously used to the new data being reported. If this is not done, public knowledge about subsequent developments in Vocational Education will have no way of distinguishing between actual accomplishments, setbacks, or merely changes in reporting. An essential part of the Baseline effort would be to follow the progress both of Vocational Education itself and what is being reported.

There are essentially six elements in the Baseline effort: (1) Collection, verification, and updating of statistics; (2) Analysis of statistics in a variety of tables showing relationships between data including Bureau of the Census data, U.S. Department of Labor data, and other data; (3) Interpretation of the tables involving further research to answer questions raised, and presenting the results so that they can be easily read and understood; (4) Extensive review of the data and interpretation by leading authorities; (5) Development of policy and action recommendations, based on the entire effort, which may be expected to improve and strengthen Vocational Education; and (6) A philosophy underlying it all which strongly supports the concept of Vocational Education, is essentially sympathetic toward those engaged in its service and critical of failures to report with rigid honesty what is actually being done.

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[72] PL 94-482, Sec. 102 (a).

[73] For the complete USOE/BOAE and Project Baseline agreement and the Baseline recommendations, see Appendix H.

When the National Center for Educational Statistics succeeds in carrying out its Congressional mandate to collect Vocational Education statistics, who will provide the other elements of the Baseline effort? All of these services could be continued by an outside agency under Congressional mandate. They could be continued under U.S. Office of Education support as they are now. They could be continued through the combined support of the National Advisory Council and the State Advisory Councils. They might eventually become self-supporting through the sale of reports rather than distributing them free. They could be continued as a voluntary effort by the present Baseline staff if other research projects were available to keep the organization going. In any case, the Baseline staff has determined that, if adequate assistance can be found, this effort will go on.

APPENDIX A

TITLE II OF THE EDUCATIONAL AMENDMENTS OF 1976

The legislation enacted this year was the product of very extensive public hearings by Committees in both the House of Representatives and the Senate. These followed a widely discussed report by the General Accounting Office. The staff work in pulling it all together was enormous, and the Committees spent weeks of deliberation in preparing two separate bills, one in the House and one in the Senate. A Conference Committee took weeks in agreeing on the final language in this and the other parts of the Act. In the opinion of Project Baseline, none of it was wasted. The legislation that came from all the work and all the ideas may well be the capstone of more than a decade of antional policy development for Vocational Education. The Baseline staff and its Advisory Council feel it is important enough to all vocational educators and those involved with this field to include it as an appendix to this volume of the Baseline reports.

TITLE II - VOCATIONAL EDUCATION

EXTENSION OF CERTAIN VOCATIONAL EDUCATION PROGRAMS

SEC. 201. (a) Section 102(a) of the Vocational Education Act of 1963 is amended by striking out the first sentence and inserting in lieu thereof: "There are authorized to be appropriated $500,000,000 for the fiscal year ending September 30, 1977, for the purposes of carrying out parts B and C of this title.".

(b) Section 102(b) of such Act is amended by striking out the first sentence and inserting in lieu thereof the following: "There are also authorized to be appropriated $30,000,000 for each fiscal year ending prior to October 1, 1977 for the purpose of section 122(a) (4) (A).".

(c) The first sentence of section 102(c) of the Vocational Education Act of 1963 is amended by inserting immediately after "1975," the following: "and $40,000,000 for the fiscal year ending September 30, 1977,".

(d) Section 103(d) (2) is amended by striking out the first sentence and inserting in lieu thereof the following: "The allotment ratios shall be promulgated by the Commissioner for each fiscal year between October 1 and December 31 of the preceding fiscal year.".

(e) Section 104(a) (4) of such Act is amended by striking out "five" and inserting in lieu thereof "seven".

(f) Section 104(a) (5) of such Act is amended by striking out "1976" and inserting in lieu thereof "1977".

(g) Section 142(a) of such Act is amended by striking out "and" after "1970,", by striking out "five" and inserting in lieu thereof "six", and by inserting immediately after "succeeding fiscal years" the following: ", and $20,000,000 for the fiscal year ending September 30, 1977".

(h) Section 151(b) of such Act is amended by striking out "July 1, 1975" and inserting in lieu thereof "October 1, 1976".

(i) Section 152(a) (1) of such Act is amended by striking out "July 1, 1975," and inserting in lieu thereof "October 1, 1976".

(j) Section 153(d) (2) of such Act is amended by striking out that part thereof which follows "not exceed $5,000,000" and inserting in lieu thereof the following: "for fiscal year 1976."

(k) The first sentence of section 161(a) (1) of such Act is amended by striking out "and" after "$35,000,000", by striking out "July 1, 1975" and inserting in lieu thereof "October 1, 1976", and by inserting immediately after "$50,000,000," the following: "and for the fiscal year ending September 30, 1977, $45,000,000,".

(l) The first sentence of section 161(c) of such Act is amended by striking out "five" and inserting in lieu thereof "seven".

(m) Section 172(a) of such Act is amended by striking out "and" after "$50,000,000,", by striking out "July 1, 1975" and inserting in lieu thereof "October 1, 1976", and by inserting immediately after "$75,000,000" the following: "and for the fiscal year ending September 30, 1977, $25,000,000,".

(n) Section 181(a) of such Act is amended by striking out "July 1, 1975," and inserting in lieu thereof "October 1, 1976, and $15,000,000 for the fiscal year ending September 30, 1977, for".

(o) Section 189(b) of such Act is amended by striking out "and" after "1969,", by striking out "July 1, 1975," and inserting in lieu thereof "October 1, 1976, and $5,000,000 for the fiscal year ending September 30, 1977,".

(p) Section 193 of such Act is amended by striking out "for the fiscal year ending June 30, 1975" and inserting in lieu thereof "for each of the fiscal years ending prior to October 1, 1976, and $10,000,000 for the fiscal year ending September 30, 1977,".

(q) Part F of title V of the Higher Education Act of 1965 is amended by adding at the end thereof a new section to read as follows:

"AUTHORIZATION OF APPROPRIATIONS

"SEC. 555. There are authorized to be appropriated for the purposes of carrying out this part $25,000,000 for each of the fiscal years ending prior to October 1, 1977.".

REVISION OF THE VOCATIONAL EDUCATION ACT OF 1963

SEC. 202. (a) The Vocational Education Act of 1963 is amended to read as follows:

"TITLE I—VOCATIONAL EDUCATION

"PART A—STATE VOCATIONAL EDUCATION PROGRAMS

"DECLARATION OF PURPOSE

"SEC. 101. It is the purpose of this part to assist States in improving planning in the use of all resources available to them for vocational education and manpower training by involving a wide range of agencies and individuals concerned with education and training within the State in the development of the vocational education plans. It is also the purpose of this part to authorize Federal grants to States to assist them—

"(1) to extend, improve, and, where necessary, maintain existing programs of vocational education,

"(2) to develop new programs of vocational education,

"(3) to develop and carry out such programs of vocational education within each State so as to overcome sex discrimination and sex stereotyping in vocational education programs (including programs of homemaking), and thereby furnish equal educational opportunities in vocational education to persons of both sexes, and

"(4) to provide part-time employment for youths who need the earnings from such employment to continue their vocational training on a full-time basis,

so that persons of all ages in all communities of the State, those in high school, those who have completed or discontinued their formal education and are preparing to enter the labor market, those who have already entered the labor market, but need to upgrade their skills or learn new ones, those with special educational handicaps, and those in postsecondary schools, will have ready access to vocational training or retraining which is of high quality, which is realistic in the light of actual or anticipated opportunities for gainful employment, and which is suited to their needs, interests, and ability to benefit from such training.

"Subpart 1—General Provisions

"AUTHORIZATION OF APPROPRIATIONS

"SEC. 102. (a) There are authorized to be appropriated $880,000,000 fiscal year 1978, $1,030,000,000 for fiscal year 1979, $1,180,000,000 for fiscal year 1980, $1,325,000,000 for fiscal year 1981, and $1,485,000,000 for fiscal year 1982, for the purpose of carrying out subparts 2 and 3 of this part.

"(b) There are also authorized to be appropriated $35,000,000 for fiscal year 1978, $40,000,000 for fiscal year 1979, $45,000,000 for fiscal year 1980, $50,000,000 for fiscal year 1981, and $50,000 000 for fiscal year 1982, for the purpose of carrying out subpart 4 of this part.

"(c) There are also authorized to be appropriated $55,000,000 for fiscal year 1978, $65,000,000 for fiscal year 1979, $75,000,000 for fiscal year 1980, $80,000,000 for fiscal year 1981, and $80,000,000 for fiscal year 1982 for the purpose of carrying out subpart 5 of this part.

"(d) There are also authorized to be appropriated $25,000,000 for fiscal year 1978 and for each fiscal year ending prior to October 1, 1982, for the purpose of assisting States in—

"(1) preparing the five-year plans required under section 107;

"(2) preparing the annual program plans and accountability reports, including the collection of necessary data, required to be submitted under section 108;

"(3) conducting the evaluations required by section 112; and

"(4) State administration of vocational education programs assisted under this act.

"ALLOTMENTS AMONG STATES

"SEC. 103. (a) (1) (A) Subject to the provisions of subsection (d) of this section, from the sums appropriated pursuant to section 102(a), the Commissioner shall first reserve an amount equal to 5 per centum of such sums. From the amount so reserved, the Commissioner shall transfer an amount, not to be less than $3,000,000 but not to exceed $5,000,000 in any fiscal year, to the National Occupational Information Coordinating Committee established pursuant to section 161 and the remainder of the amount so reserved shall be used by the Commissioner for programs of national significance under subpart 2 of part B.

"(B) (i) From the remainder of the sums appropriated pursuant to section 102(a), the Commissioner is authorized to reserve for purposes of this subparagraph an amount approximately equivalent to the same percentage of that appropriation as the population aged fifteen to twenty-four, inclusive, which is eligible to receive educational benefits as Indians from the Bureau of Indian Affairs is to the total population of all the States aged fifteen to twenty-four, inclusive, except that such amount shall not exceed 1 per centum of such remaining appropriation.

"(ii) For purposes of this subparagraph, the term 'Act of April 16, 1934' means the Act entitled 'An Act authorizing the Secretary of the Interior to arrange with States or territories for the education, medical attention, relief of distress, and social welfare of Indians, and for other purposes', enacted April 16, 1934 (48 Stat. 596; 25 U.S.C. 452-457).

"(iii) The Commissioner is directed, upon the request of any Indian tribe which has contracted with the Secretary of the Interior for the administration of programs under the Indian Self-Determination Act or under the Act of April 16, 1934, to enter into a contract or contracts with any tribal organization of any such Indian tribe to plan, conduct, and administer programs, or portions thereof, which are authorized by and consistent with the purposes of this Act, except that such contracts shall be subject to the terms and conditions of section 102 of the Indian Self-Determination Act and shall be conducted in accordance with the provisions of sections 4, 5, and 6 of the Act of April 16, 1934, which are relevant to the programs administered under this sentence. From any remaining funds reserved pursuant to division (i) of this subparagraph (B), the Commissioner is authorized to enter into an agreement with the Commissioner of the Bureau of Indian Affairs for the operation of vocational education programs authorized by this Act in institutions serving Indians described in division (i) of this subparagraph (B), and the Secretary of the Interior is authorized to receive these funds for that purpose. For the purposes of this Act, the Bureau of Indian Affairs shall be deemed to be a State board; and all the provisions of this Act shall be applicable to the Bureau as if it were a State board.

"(2) From the remainder of the sums appropriated pursuant to section 102 (a) and from all of the sums appropriated pursuant to sections 102 (b), (c), and (d), the Commissioner shall allot to each State for each fiscal year—

"(A) an amount which bears the same ratio to 50 per centum of the sums being allotted as the product of the population aged fifteen to nineteen, inclusive, in the State in the fiscal year preceding the fiscal year for which the determination is made and the State's allotment ratio bears to the sum of the corresponding products for all the States;

"(B) an amount which bears the same ratio to 20 per centum of the sums being allotted as the product of the population aged twenty to twenty-four, inclusive, in the State in the fiscal year preceding the fiscal year for which the determination is made and the State's allotment ratio bears to the sum of the corresponding products for all the States;

"(C) an amount which bears the same ratio to 15 per centum of the sums being allotted as the product of the population aged twenty-five to sixty-five, inclusive, in the State in the fiscal year preceding the fiscal year for which the determination is made and the State's allotment ratio bears to the sum of the corresponding products for all the States; and

"(D) an amount which bears the same ratio to 15 per centum of the sums being allotted as the amounts allotted to the State under subparagraphs (A), (B), and (C) for such years bears to the sum of the amounts allotted to all the States under subparagraphs (A), (B), and (C) for such year.

"(b) (1) The amount of any State's allotment under subsection (a) for any fiscal year which is less than $200,000 shall be increased to that amount, the total of the increases thereby required being derived by proportionately reducing the allotments to each of the remaining States under such subsection, but with such adjustments as may be necessary to prevent the allotment of any of such remaining States from being thereby reduced to less than that amount.

"(2) The amount of any State's allotment under subsection (a) for any fiscal year which the Commissioner determines will not be required for such fiscal year for carrying out the program for which such amount has been allotted shall be available, from time to time, for reallotment, on such dates during such year as the Commissioner shall fix, on the basis of criteria established by regulation, among other States, except that funds appropriated under section 102(b) may only be reallotted for the use set forth in section 140. Any amount reallotted to a State under this subsection for any fiscal year shall remain available for obligation during the next succeeding fiscal year and shall be deemed to be part of its allotment for the year in which it is obligated.

"(c) (1) The allotment ratio for any State shall be 1.00 less the product of—

"(A) 0.50; and

"(B) the quotient obtained by dividing the per capita income for the State by the per capita income for all the States (exclusive of Puerto Rico, Guam, American Samoa, the Virgin Islands, and the Trust Territory of the Pacific Islands), except that (i) the allotment ratio in no case shall be more than 0.60 or less than 0.40, and (ii) the allotment ratio for Puerto Rico, Guam, American Samoa, the Virgin Islands, and the Trust Territory of the Pacific Islands shall be 0.60.

"(2) The allotment ratios shall be promulgated by the Commissioner for each fiscal year between October 1 and December 31 of the fiscal year preceding the fiscal year for which the determination is made. Allotment ratios shall be computed on the basis of the average of the appropriate per capita incomes for the three most recent consecutive fiscal years for which satisfactory data are available.

"(3) The term 'per capita income' means, with respect to a fiscal year, the total personal income in the calendar year ending in such year, divided by the population of the area concerned in such year.

"(4) For the purposes of this section, population shall be determined by the Commissioner on the basis of the latest estimates available to him.

"(d) The amount of any State's allotment under this section from appropriations provided under section 102, for any fiscal year shall not be less than the total amount of payments made to the State under allotments determined under this Act for the fiscal year ending June 30, 1976.

"(e) From the sums allotted to a State under this section from appropriations made under section 102(a), 80 per centum of such sums shall be available to each State for the purpose of carrying out subpart 2 of this part and 20 per centum shall be available for the purpose of carrying out subpart 3 of this part.

"STATE ADMINISTRATION

"SEC. 104. (a) (1) Any State desiring to participate in the programs authorized by this Act shall, consistent with State law, designate or establish a State board or agency (hereinafter in this Act referred to as the 'State board') which shall be the sole State agency responsible for the administration, or for the supervision of the administration, or such programs. The responsibilities of the State board shall include—

"(A) the coordination of the development of policy with respect to such programs;

"(B) the coordination of the development, and the actual submission to the Commissioner, of the five-year State plan required by section 107 and of the annual program plan and accountability report required by section 108; and

"(C) the consultation with the State advisory council on vocational education and other appropriate State agencies, councils, and individuals involved in the planning and reporting as required by sections 107 and 108.

Except with respect to those functions set forth in the preceding sentence, the State board may delegate any of its other responsibilities involving administration, operation, or supervision, in whole or in part, to one or more appropriate State agencies.

"(2) Each State Board shall certify to the Commissioner, as part of its annual program plan and accountability report submitted pursuant to section 108, any delegation of its responsibilities for administration, operation, or supervision of vocational education programs under this Act to other appropriate State agencies, setting forth the specific responsibility delegated and the specific agency involved.

"(3) Each State board shall also certify to the Commissioner, as part of its five-year plan and as part of its annual program plan and accountability report, that each of the agencies, councils, and individuals required to be involved in formulating the five-year plan and the annual plan and report have been afforded the opportunity to be involved in accordance with the provisions of this Act.

"(b) (1) Any State desiring to participate in the programs authorized by this Act shall also assign such full-time personnel as may be necessary to assist the State board in fulfilling the purposes of this Act by—

"(A) taking such action as may be necessary to create awareness of programs and activities in vocational education that are designed to reduce sex stereotyping in all vocational education programs;

"(B) gathering, analyzing, and disseminating data on the status of men and women, students and employees in the vocational education programs of that State;

"(C) developing and supporting actions to correct any problems brought to the attention of such personnel through activities carried out under clause (B) of this sentence;

"(D) reviewing the distribution of grants by the State board to assure that the interests and needs of women are addressed in the projects assisted under this Act;

"(E) reviewing all vocational education programs in the State for sex bias;

"(F) monitoring the implementation of laws prohibiting sex discrimination in all hiring, firing, and promotion procedures within the State relating to vocational education;

"(G) reviewing and submitting recommendations with respect to the overcoming of sex stereotyping and sex bias in vocational education programs for the annual program plan and report;

"(H) assisting local educational agencies and other interested parties in the State in improving vocational education opportunities for women; and

"(I) making readily available to the State board, the State and National Advisory Councils on Vocational Education, the State Commission on the Status of Women, the Commissioner and the general public, information developed pursuant to this subsection.

"(2) From the funds appropriated to carry out subpart 2, each State shall reserve $50,000 in each fiscal year to carryout this subsection.

"(3) For the purpose of this subsection, the term 'State' means any one of the fifty States and the District of Columbia.

"STATE AND LOCAL ADVISORY COUNCILS

"SEC. 105. (a) Any State which desires to participate in programs under this Act for any fiscal year shall establish a State advisory council, which shall be appointed by the Governor or, in the case of States in which the members of the State board of education are elected (including election by the State legislature), by such board. Members of each State advisory council shall be appointed for terms of three years except that (1) in the case of the members appointed for fiscal year 1978, one-third of the membership shall be appointed for terms of one year each and one-third shall be appointed for terms of two years each, and (2) appointments to fill vacancies shall be for such terms as remain unexpired. Each State advisory council shall have as a majority of its members persons who are not educators or administrators in the field of education and shall include as members one or more individuals who—

"(1) represent, and are familiar with, the vocational needs and problems of management in the State;

"(2) represent, and are familiar with, the vocational needs and problems of labor in the State;

"(3) represent, and are familiar with, the vocational needs and problems of agriculture in the State;

"(4) represent State industrial and economic development agencies;

"(5) represent community and junior colleges;

"(6) represent other institutions of higher education, area vocational schools, technical institutes, and postsecondary agencies or institutions which provide programs of vocational or technical education and training;

"(7) have special knowledge, experience, or qualifications with respect to vocational education but are not involved in the administration of State or local vocational education programs;

"(8) represent, and are familiar with, public programs of vocational education in comprehensive secondary schools;

"(9) represent, and are familiar with, nonprofit private schools;

"(10) represent, and are familiar with, vocational guidance and counseling services;

"(11) represent State correctional institutions;

"(12) are vocational education teachers presently teaching in local educational agencies;

"(13) are currently serving as superintendents or other administrators of local educational agencies;

"(14) are currently serving on local school boards;

"(15) represent the State Manpower Services Council established pursuant to section 107 of the Comprehensive Employment and Training Act of 1973;

"(16) represent school systems with large concentrations of persons who have special academic, social, economic, and cultural needs and of persons who have limited English-speaking ability;

"(17) are women with backgrounds and experiences in employment and training programs, and who are knowledgeable with respect to the special experiences and problems of sex discrimination in job training and employment and of sex stereotyping in vocational education, including women who are members of minority groups and who have, in addition to such backgrounds and experiences, special knowledge of the problems of discrimination in job training and employment against women who are members of such groups;

"(18) have special knowledge, experience, or qualifications with respect to the special educational needs of physically or mentally handicapped persons;

"(19) represent the general public, including a person or persons representing and knowledgeable about the poor and disadvantaged; and

"(20) are vocational education students who are not qualified for membership under any of the preceding clauses of this paragraph.

Members of the State advisory council may not represent more than one of the above-specified categories. In appointing the State advisory council the Governor or the State board of education, as the case may be, shall insure that there is appropriate representation of both sexes, racial and ethnic minorities, and the various geographic regions of the State.

"(b) Not less than ninety days prior to the beginning of any fiscal year in which a State desires to receive a grant under this Act, the State shall certify the establishment of, and membership of, its State advisory council to the Commissioner.

"(c) Each State advisory council shall meet within thirty days after certification has been accepted by the Commissioner and shall select from among its membership a Chairman. The time, place, and manner of meeting, as well as council operating procedures and staffing, shall be as provided by the rules of the State advisory council, except that such rules must provide for not less than one public meeting each year at which the public is given an opportunity to express views concerning the vocational education program of the State.

"(d) (1) Each State advisory council shall advise the State board in the development of the five-year State plan submitted under section 107 and the annual program plan and accountability report submitted under section 108 and shall advise the State board on policy matters arising out of the administration of programs under such plans and reports.

"(2) Each State advisory council shall also evaluate vocational education programs, services, and activities assisted under this Act, and publish and distribute the results thereof.

"(3) Each State advisory council shall prepare and submit to the Commissioner and to the National Advisory Council created under section 162, through the State board, an annual evaluation report, accompanied by such additional comments of the State board as the State board deems appropriate, which (A) evaluates the effectiveness of vocational education programs, services, and activities carried out in the year under review in meeting the program goals set forth in the five-year State plan submitted under section 107 and the annual program plan and accountability report submitted under section 108, including a consideration of the program evaluation reports developed by the State pursuant to section 112 and of the analysis of the distribution of Federal funds within the State submitted by the State board pursuant to section 108, and (B) recommends such changes in such programs, services, and activities as may be deemed necessary.

"(4) (A) Each State advisory council shall identify, after consultation with the State Manpower Services Council, the vocational education and employment and training needs of the State and assess the extent to which vocational education, employment training, vocational rehabilitation, and other programs assisted under this and related Acts represent a consistent, integrated, and coordinated approach to meeting such needs; and (B) comment, at least once annually, on the reports of the State Manpower Services Council, which comments shall be included in the annual report submitted by the State advisory council pursuant to this section and in the annual report submitted by the State council pursuant to section 107 of the Comprehensive Employment and Training Act of 1973.

"(e) Each State advisory council is authorized to obtain the services of such professional, technical, and clerical personnel as may be necessary to enable it to carry out its functions under this Act and to contract for such services as may be necessary to carry out its evaluation functions independent of programmatic and administrative control by other State boards, agencies, and individuals.

"(f) (1) There are hereby authorized to be appropriated $8,000,000 for fiscal year 1978, $8,500,000 for fiscal year 1979, $9,000,000 for fiscal year 1980, $10,000,000 for fiscal year 1981, and $8,000,000 for fiscal year 1982, for the purpose of making grants to State advisory councils to carry out the functions specified in this section. From the sums appropriated pursuant to this subsection, the Commissioner shall, subject to the provisions of the following sentence, make grants to State advisory councils to carry out the functions specified in this section, and shall pay to each State advisory council an amount equal to the reasonable amounts expended by it in carrying out its functions under this Act in such fiscal year, except that no State advisory council shall receive an amount to exceed $200,000 or an amount less than $75,000. In the case of Guam, American Samoa, and the Trust Territory of the Pacific Islands, the Commissioner may pay the State advisory council in each such jurisdiction an amount less than the minimum specified in the preceding sentence if he determines that the council can perform its functions with a lesser amount.

"(2) The expenditure of these funds is to be determined solely by the State advisory council for carrying out its functions under this Act, and may not be diverted or reprogramed for any other purpose by any State board, agency or individual. Each council shall designate an appropriate State agency or other public agency, eligible to receive funds under this Act, to act as its fiscal agent for purposes of disbursement, accounting, and auditing.

"(g) (1) Each eligible recipient receiving assistance under this Act to operate vocational education programs shall establish a local advisory council to provide such agency with advice on current job needs and on the relevancy of courses being offered by such agency in meeting such needs. Such local advisory councils shall be composed of members of the general public, especially of representatives of business, industry, and labor; and such local advisory councils may be established for program areas, schools, communities, or regions, whichever the recipient determines best to meet the needs of that recipient.

"(2) Each State board shall notify eligible recipients within the State of the responsibilities of such recipients under the provisions of paragraph (1); and each State advisory council shall make available to such recipients and the local advisory councils of such recipients such technical assistance as such recipients may request to establish and operate such councils.

"GENERAL APPLICATION

"SEC. 106. (a) Any State desiring to receive the amount for which it is eligible for any fiscal year pursuant to this Act shall, through its State board, submit to, and maintain on file with, the Commissioner a general application providing assurances—

"(1) that the State will provide for such methods of administration as are necessary for the proper and efficient administration of the Act;

"(2) that the State board will cooperate with the State advisory council on vocational education in carrying out its duties pursuant to section 105 and with the agencies, councils, and individuals specified in sections 107 and 108 to be involved in the formulation of the five-year State plan and of the annual program plans and accountability reports;

"(3) that the State will comply with any requests of the Commissioner for making such reports as the Commissioner may reasonably require to carry out his functions under this Act;

"(4) that funds will be distributed to eligible recipients on the basis of annual applications which—

"(A) have been developed in consultation (i) with representatives of the educational and training resources available in the area to be served by the applicant and (ii) with the local advisory council required to be established by this Act to assist such recipients,

"(B) (i) describe the vocational education needs of potential students in the area or community served by the applicant and indicate how, and to what extent, the program proposed in the application will meet such needs, and (ii) describe how the findings of any evaluations of programs operated by such applicant during previous years, including those required by this Act, have been used to develop the program proposed in the application,

"(C) describe how the activities proposed in the application relate to manpower programs conducted in the area by a prime sponsor established under the Comprehensive Employment and Training Act of 1973, if any, to assure a coordinated approach to meeting the vocational education and training needs of the area or community, and

"(D) describe the relationship between vocational education programs proposed to be conducted with funds under this Act and other programs in the area or community which are supported by State and local funds;

and that any eligible recipient dissatisfied with final action with respect to any application for funds under this Act shall be given reasonable notice and opportunity for a hearing;

"(5) (A) that the State shall, in considering the approval of such applications, give priority to those applicants which—

"(i) are located in economically depressed areas and areas with high rates of unemployment, and are unable to provide the resources necessary to meet the vocational education needs of those areas without Federal assistance, and

"(ii) propose programs which are new to the area to be served and which are designed to meet new and emerging manpower needs and job opportunities in the area and, where relevant, in the State and the Nation; and

"(B) that the State shall, in determining the amount of funds available under this Act which shall be made available to those applicants approved for funding, base such distribution on economic, social and demographic factors relating to the need for vocational education among the various populations and the various areas of the State, except that—

"(i) the State will use as the two most important factors in determining this distribution (I) in the case of local educational agencies, the relative financial ability of such agencies to provide the resources necessary to meet the need for vocational education in the areas they service and the relative number or concentration of low-income families or individuals within such agencies, and (II) in the case of other eligible recipients, the relative financial ability of such recipients to provide the resources necessary to initiate or maintain vocational education programs to meet the needs of their students and the relative number or concentration of students whom they serve whose education imposes higher than average costs, such as handicapped students, students from low-income families, and students from families in which English is not the dominant language; and

"(ii) the State will not allocate such funds among eligible recipients within the State on the basis of per capita enrollment or through matching of local expenditures on a uniform percentage basis, or deny funds to any recipient which is making a reasonable tax effort solely because such recipient is unable to pay the non-Federal share of the cost of new programs;

"(6) that Federal funds made available under this Act will be so used as to supplement, and to the extent practicable, increase the amount of State and local funds that would in the absence of such Federal funds be made available for the uses specified in the Act, and in no case supplant such State or local funds;

"(7) that the State will make provision for such fiscal control and fund accounting procedures as may be necessary to assure proper disbursement of, and accounting for, Federal funds paid to the State (including such funds paid by the State to eligible recipients under this Act);

"(8) that funds received under this Act will not be used for any program of vocational education (except personnel training programs under section 135, renovation programs under subpart 4 of Part B, and homemaking programs under subpart 5 of this part which cannot be demonstrated to prepare students for employment, be necessary to prepare individuals for successful completion of such a program, or be of significant assistance to individuals enrolled in making an informed and meaningful occupational choice as an integral part of a program of orientation and preparation;

"(9) that the State has instituted policies and procedures to insure that copies of the State plan and annual program plan and accountability report and all statements of general policies, rules, regulations, and procedures issued by the State board and by any State agencies to which any responsibility is delegated by the State board concerning the administration of such plan and report will be made reasonably available to the public; and

"(10) that the funds used for purposes of section 110(a) are consistent with the State plan submitted pursuant to section 613(a) of the Education of the Handicapped Act.

"(b) Such general application shall be considered to be the general application required to be submitted by the State for funds received under the Vocational Education Act of 1963 under the provisions of subsection (b) of section 434 of the General Education Provisions Act.

"FIVE-YEAR STATE PLANS

"SEC. 107. (a) (1) Any State desiring to receive funds under this Act shall submit to the Commissioner, during fiscal year 1977 and during each fifth fiscal year occurring thereafter, a State plan for vocational education for the five fiscal years succeeding each such fiscal year. In formulating this plan, the State board shall involve the active participation of—

"(A) a representative of the State agency having responsibility for secondary vocational education programs, designated by that agency;

"(B) a representative of the State agency, if such separate agency exists, having responsibility for postsecondary vocational education programs, designated by that agency;

"(C) a representative of the State agency, if such separate agency exists, having responsibility for community and junior colleges, designated by that agency;

"(D) a representative of the State agency, if such separate agency exists, having responsibility for institutions of higher education in the State, designated by that agency;

"(E) a representative of a local school board or committee, as determined by State law;

"(F) a representative of vocational education teachers, as determined by State law;

"(G) a representative of local school administrators, as determined by State law;

"(H) a representative of the State Manpower Services Council appointed pursuant to section 107 (a) (2) (A) (i) of the Comprehensive Employment and Training Act of 1973, designated by that council;

"(I) a representative of the State agency or commission responsible for comprehensive planning in postsecondary education, which planning reflects programs offered by public, private non-profit and proprietary institutions, and includes occupational programs at a less-than-baccalaureate degree level, if such separate agency or commission exists, designated by that agency or commission; and

"(J) a representative of the State advisory council on vocational education, designated by that council.

This participation shall include at least four meetings during the planning year between representatives of the State board and representatives of all of these agencies, councils, and individuals, meeting as a group. The first of these meetings shall be before the plan is developed; the second meeting shall be to consider the first draft of the plan; the third meeting shall be to consider the draft of the plan rewritten to reflect the results of the second meeting; and the fourth meeting shall be to approve the final plan. If these agencies, councils, and individuals, and the State board are not able to agree upon the provisions of the State plan, the State board shall have the responsibility for reaching a final decision on those provisions; but the State board shall include in the plan (a) the recommendations rejected by the board, (b) the agency, council, or individual making each such recommendation, and (c) the reasons of the State board for rejecting these recommendations. Any agency or council described above which is dissatisfied with any final decision of the State board may appeal the board's decision to the Commissioner. In such a case the Commissioner shall afford such agency or council and the State board reasonable notice and opportunity for a hearing and shall determine whether the State board's decision is supported by substantial evidence, as shown in the State plan, and will best carry out the purposes of the Act. Any agency or State board dissatisfied with a final action of the Commissioner under this subsection may appeal to the United States Court of Appeals for the circuit in which the State is located in accordance with the procedure specified in section 434(d) (2) of the General Education Provisions Act.

"(2) The State board shall, during the years in which it formulates any five-year plan required under this section, conduct a series of public hearings, after giving sufficient public notice, throughout all regions of the State in order to permit all segments of the population to give their views on the goals which ought to be adopted in the State plan, including the courses to be offered, the allocations of responsibility for these courses among the various levels of education and among the various institutions of the States, and the allocations of local, State, and Federal resources to meet those goals. These views shall be included in the final State plan with a description of how such views are reflected in the plan; and if particular views are not reflected, then the plan shall set out the reasons for rejecting them.

"(b) The five-year State plans shall be submitted to the Commissioner by the July 1st preceding the beginning of the first fiscal year for which such plan is to take effect and shall—

"(1) assess the current and future needs for job skills within the State and, where appropriate, within the pertinent region of the country, through consideration of the latest available data of present and projected employment, including the data available under section 161;

"(2) set out explicitly the goals the State will seek to achieve by the end of the five-year period of the State plan in meeting the need for particular job skills identified through the assessment undertaken in accordance with paragraph (1), including (A) a description of these goals in terms of—

"(i) the courses and other training opportunities to be offered to achieve those skills,

"(ii) the projected enrollments of those courses and other training opportunities,

"(iii) the allocations of responsibility for the offering of those courses and training opportunities among the various levels of education and among the various institutions of the State, and

"(iv) the allocations of all local, State, and Federal financial resources available in the State among these courses and training opportunities, levels of education, and institutions within the State,

and (B) the reasons for choosing these courses and training opportunities, enrollments, allocations of responsibilities, and allocations of resources;

"(3) (A) set out explicitly the planned uses of Federal, State, and local vocational education funds for each fiscal year of the State plan and show how these uses will enable the State to achieve these goals, including (i) a description of these uses of funds in terms of the elements listed in clauses (2) (A) (i) through (2) (A) (iv) above, and (ii) the reasons for choosing these particular uses, except that the State will continue to use approximately the same amount of its State grant under subpart 2 of this part for programs in secondary schools during fiscal years 1978 and 1979 as it had used during fiscal years 1975 and 1976 unless the State is able to demonstrate in its five-year plan the need to shift funds from such use;

"(B) (i) set out explicitly the uses which the State intends to make of the funds available to it under this Act, as those uses are set out in sections 120, 130, 140, and 150, and set out the reasons for choosing such uses; and (ii) set out explicitly the uses which the State intends to make of these funds to meet the special needs of handicapped and disadvantaged persons and persons who have limited English-speaking ability;

"(4) (A) set forth policies and procedures which the State will follow so as to assure equal access to vocational education programs by both women and men including—

"(i) a detailed description of such policies and procedures,

"(ii) actions to be taken to overcome sex discrimination and sex stereotyping in all State and local vocational education programs, and

"(iii) incentives, to be provided to eligible recipients so that such recipients will—

"(I) encourage the enrollment of both women and men in nontraditional courses of study, and

"(II) develop model programs to reduce sex stereotyping in all occupations; and

"(B) set forth a program to assess and meet the needs of persons described in section 120(b) (1) (L) which shall provide for (i) special courses for such persons in learning how to seek employment, and (ii) placement services for such graduates of vocational education programs and courses; and

"(5) set out criteria which have been developed for coordinating manpower training programs conducted by prime sponsors established under the Comprehensive Employment and Training Act of 1973 with vocational education programs assisted under this Act and for coordinating such vocational education programs with such manpower training programs.

"ANNUAL PROGRAM PLANS AND ACCOUNTABILITY REPORTS

"SEC. 108. (a) (1) Any State desiring to receive funds under this Act shall submit to the Commissioner an annual program plan and accountability report for each of the fiscal years included in the five-year State plan. In formulating this plan and report, the State board shall involve the active participation of the agencies, councils, and individuals who are required to be involved in formulating the five-year State plan as described in section 107. This participation shall include at least three meetings during each fiscal year between representatives of the State board and representatives of all of these agencies, councils, and individuals, meeting as a group. The first of these meetings shall be before the plan and report is developed; the second meeting shall be to consider the draft of the plan and report; and the third meeting shall be to approve the final plan and report. If these agencies, councils, and individuals, and the State board are not able to agree upon the provisions of the plan and report, the State board shall have the same responsibility for reaching a final decision on those provisions as it has for reaching a final decision on the five-year State plan under section 107; and the same requirements shall be applicable concerning inclusion of rejected recommendations, appeal of the board's decision to the Commissioner, and judicial review as are applicable to the five-year State plan under section 107.

"(2) The State board shall, during each fiscal year, conduct a public hearing, after giving sufficient public notice, on the annual planning and accountability report in order to permit all segments of the population to give their view on the provisions of the plan and report. These views shall be included in the final plan and report with a description of how such views are reflected in the plan and report; and if particular views are not reflected, then the plan and report shall set out the reasons for rejecting them.

"(b) The annual program plan and accountability report shall be submitted to the Commissioner by the July 1st preceding the beginning of the fiscal year for which the plan is to be effective. This plan and report shall contain:

"(1) planning provisions which—

"(A) set out any updating of the five-year State plan deemed necessary to reflect later or more accurate employment data or a different level of funding than was anticipated;

"(B) (i) set out explicitly how the State during that fiscal year will comply with the uses of Federal, State, and local funds proposed for that fiscal year in the five-year plan, including a description of these uses in terms of the elements listed in clauses (2) (A) (i) through (2) (A) (iv) of section 107, and describe how these uses of funds may differ from those proposed in the five-year plan and give the reasons for any such changes;

"(ii) set out explicitly the uses which the State intends to make of the funds available to it under this Act for that fiscal year, as those uses are set out in sections 120, 130, 140, and 150, and describe how those uses may differ from the uses proposed in the five-year plan and give the reasons for any such changes, and set out explicitly the proposed distribution of such funds among eligible recipients, together with an analysis of the manner in which such distribution complies with the assurance given in the general application under section 106(a) (5) relating to the distribution of Federal funds; and

"(C) show the results of the—

"(i) coordination of programs funded under this Act with manpower training programs and of manpower training programs with programs funded under this Act;

"(ii) compliance of the State plan with the provision contained in section 107(b) (4) (A) concerning providing equal access to programs by both men and women; and

"(iii) participation of local advisory councils required to be established under section 105(g); and

"(2) reporting provisions which—

"(A) show explicitly the extent to which the State during the fiscal year preceding the submission of the plan and report has achieved the goals of the five-year plan and the degree to which the uses of Federal, State, and local funds proposed for that fiscal year in the plan have been compiled with, including a description of these goals and uses in terms of the elements listed in clauses (2) (A) (i) through (2) (A) (iv) of section 107(b);

"(B) show explicitly how funds available under this Act have been used during that fiscal year, including a description of the uses of these funds among the authorized uses of funds set out in sections 120, 130, 140, and 150, and including a description of the distribution of these funds among local educational agencies and other eligible recipients in conformity with the requirements contained in section 106(a) (5), and give the results achieved with these funds; and

"(C) contain a summary of the evaluations of programs required to be conducted by section 112 and a description of how the information from these evaluations has been, or is being, used by the State board to improve its programs.

"SUBMISSION OF PLANS; WITHHOLDING AND JUDICIAL REVIEW

"SEC. 109. (a) (1) The Commissioner shall not approve a five-year State plan submitted under section 107 until he has made specific findings, in writing, as to the compliance of such plan with the provisions of this Act and he is satisfied that adequate procedures are set forth to insure that the assurances of the general application submitted under section 106 and the provisions of the State plan will be carried out.

"(2) The Commissioner shall not approve an annual program plan and accountability report submitted under section 108 until he has made specific findings, in writing, as to the compliance of such plan and report with the provisions of this Act, he is satisfied that adequate procedures are set forth to insure that the assurances of the general application submitted under section 107 are being carried out, and he is satisfied that the annual plan and report shows progress in achieving the goals set forth in the five-year State plan.

"(3) (A) In carrying out the provisions of this subsection, the Commissioner shall provide for appropriate review of each State's five-year plan and annual program plan and report by the various agencies administering programs within the Office of Education related to the vocational education programs being proposed under the State plan or the program plan and report.

"(B) In carrying out the provisions of this subsection, the Commissioner shall not approve a State plan or annual program plan and report until he has received assurances that the personnel assigned to review programs within the State to assure equal access by both men and women under the provisions of section 104(b) have been afforded the opportunity to review the plan or program plan and report.

"(C) In carrying out the provisions of this subsection, the Commissioner shall not approve a State plan or annual program plan and report unless the State has complied in compiling this plan or program plan and report with the nationally uniform definitions and information elements which have been developed pursuant to section 161.

"(b) (1) The Commissioner shall not finally disapprove any State plan or program plan and report submitted under this Act, or any modification thereof, without first affording the State board submitting the plan or program plan and report reasonable notice and opportunity for a hearing.

"(2) The Commissioner shall not disapprove any plan or program plan and report submitted under this Act solely on the basis of the distribution of State and local expenditures for vocational education.

"(c) Whenever the Commissioner, after reasonable notice and opportunity for hearing to the State board, finds that—

"(1) the State plan or program plan and report has been so changed that it no longer complies with the provisions of this Act, or

"(2) in the administration of the plan or program plan and report there is a failure to comply substantially with any such provision,

the Commissioner shall notify such State board that no further payments will be made to the State under this Act (or, in his descretion, further payments to the State will be limited to programs under or portions of the State plan or program plan and report not affected by such failure) until he is satisfied that there will no longer be any failure to comply. Until he is so satisfied, the Commissioner shall make no further payments to such State under this Act (or shall limit payments to programs under, or portions of, the State plan or program plan and report not affected by such failure).

"(d) A state board which is dissatisfied with a final action of the Commissioner under this section may appeal to the United States court of appeals for the circuit in which the State is located, by filing a petition with such court within sixty days after such final action. A copy of the petition shall be forthwith transmitted by the clerk of the court to the Commissioner, or any officer designated by him for that purpose. The Commissioner thereupon shall file in the court the record of the proceedings on which he based his action, as provided in section 2112 of title 28, United States Code. Upon the filing of such petition, the court shall have jurisdiction to affirm the action of the Commissioner or to set aside such action, in whole or in part, temporarily or permanently, but until the filing of the record the Commissioner may modify or set aside his action. The findings of the Commissioner as to the facts, if supported by substantial evidence, shall be conclusive, but the court, for good cause shown, may remand the case to the Commissioner to take further evidence, and the Commissioner may thereupon make new or modified findings of fact and may modify his previous action, and shall file in the court the record of the further proceedings. Such new or modified findings of fact shall likewise be conclusive if supported by substantial evidence. The judgement of the court affirming or setting aside, in whole or in part, any action of the Commissioner shall be final, subject to review by the Supreme Court of the United States upon certiorari or certification as provided in section 1254 of title 28, United States Code. The commencement of proceedings under this subsection shall not, unless so specifically ordered by the court, operate as a stay of the Commissioner's action.

"(e) (1) If any eligible recipient is dissatisfied with the final action of the State board or other appropriate State administering agency with respect to approval of an application by such eligible recipient for a grant pursuant to this Act, such eligible recipient may, within sixty days after such final action or notice thereof, whichever is later, file with the United States court of appeals for the circuit in which the State is located a petition for review of that action. A copy of the petition shall be forthwith transmitted by the clerk of the court to the State board or other appropriate State administering agency. The State board or such other agency thereupon shall file in the court the record of the proceedings on which the State board or such other agency based its action, as provided in section 2112 of title 28, United States Code.

"(2) The findings of fact by the State board or other appropriate administering agency, if supported by substantial evidence, shall be conclusive; but the court, for good cause shown, may remand the case to the State board or other such agency to take further evidence, and the State board or such other agency may thereupon make new or modified findings of fact and may modify its previous action, and shall certify to the court the record of the further proceedings.

"(3) The court shall have jurisdiction to affirm the action of the State board or other appropriate administering agency or to set it aside, in whole or in part. The judgement of the court shall be subject to review by the Supreme Court of the United States upon certiorari or certification as provided in section 1254 of title 28, United States Code.

"(f) (1) The Commissioner shall prescribe and implement rules to assure that any hearing conducted under section 434(c) of the General Education Provisions Act in connection with funds made available from appropriations under this Act shall be held within the State of the affected unit of local government or geographic area within the State.

"(2) For the purposes of paragraph (1)—

"(A) the term 'unit of local government' means a county, municipality, town, township, village, or other unit of general government below the State level; and

"(B) the term 'geographic area within a State' means a special purpose district or other region recognized for governmental purposes within such State which is not a unit of local government.

"NATIONAL PRIORITY PROGRAMS

"SEC. 110. (a) For each fiscal year, at least 10 per centum of each State's allotment under section 103 shall be used to pay 50 per centum of the cost of vocational education for handicapped persons.

"(b) (1) For each fiscal year, at least 20 per centum of each State's allotment under section 103 shall be used to pay 50 per centum of the cost of vocational education for disadvantaged persons (other than handicapped persons), for persons who have limited English-speaking ability, and for providing stipends authorized under section 120(b) (1) (G).

"(2) From the funds used by a State pursuant to paragraph (1), each State shall use an amount equivalent to the same percentage of the funds reserved pursuant to that paragraph as the population aged fifteen to twenty-four, inclusive, having limited English-speaking ability is to the total population of the State aged fifteen to twenty-four, inclusive, for providing vocational education for such persons with limited English-speaking ability, except that such amount shall not exceed the full sum used pursuant to paragraph (1).

"(c) For each fiscal year, at least 15 per centum of each State's allotment under section 103 shall be used to pay 50 per centum of the cost of vocational education for (1) persons who have completed or left high school and who are enrolled in organized programs of study for which credit is given toward an associate or other degree, but which programs are not designed as baccalaureate or higher degree programs, and (2) persons who have already entered the labor market, or are unemployed, or who have completed or left high school and who are not described in paragraph (1).

"(d) Each State shall use, to the maximum extent possible, the funds required to be used for the purposes specified in subsections (a) and (b) to assist individuals described in those subsections to participate in regular vocational education programs.

"PAYMENTS TO STATES

"SEC. 111. (a) (1) The Commissioner shall pay, from the amount available to each State for grants under this part (except subpart 5) to eligible recipients, an amount equal to—

> "(A) 50 per centum of the cost of carrying out its annual program plan as approved pursuant to section 109, other than programs and activities for persons described in section 110;
>
> "(B) 50 per centum of the cost of vocational education programs for persons with special needs described in section 110(a), (b), and (c); and
>
> "(C) 100 per centum of the cost of vocational education programs described in sections 122(f), 133(b), and 140;

except that in the case of the Trust Territory of the Pacific Islands and American Samoa, such amount shall be equal to 100 per centum of such expenditures.

"(2) (A) In addition, the Commissioner shall pay, from the amount available to each State for administration of State plans appropriated under section 102(d), an amount equal to the Federal share of the cost of administration of such plan.

"(B) For the purpose of this paragraph, the Federal share for any fiscal year shall be 50 per centum, except that (1) for fiscal year 1978 it shall be 80 per centum and for fiscal year 1979 it shall be 60 per centum, and (2) whenever the Commissioner determines in exceptional circumstances that for the fiscal year preceding fiscal year 1978 State and local expenditures for vocational education in a State exceed ten times the Federal expenditure for vocational education in that State, and that the State has an appropriate, economic, and efficient State administration of the program, the Commissioner shall set the Federal share for fiscal year 1978 for that State in excess of the Federal share specified in clause (1), but not to exceed 100 per centum.

"(b) (1) No payments shall be made in any fiscal year under this Act to any local educational agency or to any State unless the Commissioner finds, in the case of a local educational agency, that the combined fiscal effort per student or the aggregate expenditures of that agency and the State with respect to the provision of vocational education by that agency for the fiscal year preceding the fiscal year for which the determination was made was not less than such combined fiscal effort per student or the aggregate expenditures for that purpose for the second preceding fiscal year or, in the case of a State, that the fiscal effort per student or the aggregate expenditures of that State for vocational education in that State for the fiscal year preceding the fiscal year for which the determination was made was not less than such fiscal effort per student or the aggregate expenditures for vocational education for the second preceding fiscal year.

"(2) No payments shall be made in any fiscal year under this Act to any postsecondary educational institution unless the Commissioner finds that the aggregate amount or the amount per student spent by such institution from current funds for vocational education purposes for the fiscal year preceding the fiscal year for which the determination was made was not less than such amount spent by such institution from current funds for the second preceding fiscal year.

"FEDERAL AND STATE EVALUATIONS

"SEC. 112. (a) In order for the Federal government to assist the States in operating the best possible programs of vocational education—

"(1) the Commissioner shall within four months of the receipt of a State's annual program plan and accountability report transmit to that State board an analysis of such plan and report, including suggestions for improvements in the State's programs and findings contained in any program or fiscal audits performed in that State pursuant to paragraph (2); and

"(2) the Bureau of Occupational and Adult Education shall, in at least ten States a fiscal year during the period beginning October 1, 1977, and ending September 30, 1982, conduct a review analyzing the strengths and weaknesses of the programs assisted with funds available under this Act within those States; and the Department of Health, Education, and Welfare shall, in the same period, conduct fiscal audits of such programs within those States.

"(b) (1) In order for the States to assist local educational agencies and other recipients of funds in operating the best possible programs of vocational education—

"(A) each State shall, during the five-year period of the State plan, evaluate the effectiveness of each program within the State being assisted with funds available under this Act; and the results of these evaluations shall be used to revise the State's programs, and shall be made readily available to the State advisory council; and

"(B) each State shall evaluate, by using data collected, wherever possible, by statistically valid sampling techniques, each such program within the State which purports to impart entry level job skills according to the extent to which program completers and leavers—

"(i) find employment in occupations related to their training and

"(ii) are considered by their employers to be well-trained and prepared for employment,

except that in no case can pursuit of additional education or training by program completers or leavers be considered negatively in these evaluations.

"(2) Each State, in formulating its plans to fulfill these requirements, shall annually consult with the State advisory council which shall assist the State in developing these plans, monitor the evaluations conducted by the State, and use the results of these evaluations in compiling its annual report required by section 105.

"(c) The Commissioner shall prepare and submit annually to the Congress, within nine months of the termination of each fiscal year, a report on the status of vocational education in the country during that fiscal year. This report shall include data on the information elements developed in the national vocational education data reporting and accounting system and an analysis of such data, and a summary of the findings of the reviews and audits required by paragraph (2) of subsection (a) and of the evaluations performed pursuant to paragraphs (1) and (2) of subsection (b).

"Subpart 2 Basic Grant

"AUTHORIZATION OF GRANTS AND USES OF FUNDS

"SEC. 120. (a) From the sums made available for grants under this subpart pursuant to section 103, the Commissioner is authorized to make grants to States to assist them in conducting vocational education programs in accordance with the requirements of this subpart.

"(b) (1) Grants to States under this subpart may be used, in accordance with five-year State plans and annual program plans approved pursuant to section 109, for the following purposes:

"(A) vocational education programs;

"(B) work study programs as described in section 121;

"(C) cooperative vocational education programs as described in section 122;

"(D) energy education programs as described in section 123;

"(E) construction of area vocational education school facilities;

"(F) support of full-time personnel to perform the duties described in section 104(b);

"(G) the provision of stipends, subject to the restriction contained in paragraph (2), which shall not exceed reasonable amounts, as prescribed by the Commissioner pursuant to regulations, for students entering or already enrolled in vocational education programs, if those students have acute economic needs which cannot be met under work-study programs;

"(H) placement services for students who have successfully completed vocational education programs, subject to the restriction contained in paragraph (2);

"(I) industrial arts programs where such programs will assist in meeting the purposes of this Act;

"(J) support services for women who enter programs designed to prepare individuals for employment in jobs which have been traditionally limited to men, including counseling as to the nature of such programs and the difficulties which may be encountered by women in such programs, and job development and job follow up services;

"(K) day care services for children of students in secondary and postsecondary vocational education programs;

"(L) vocational education for—

"(i) persons who had solely been homemakers but who now, because of dissolution of marriage, must seek employment;

"(ii) persons who are single heads of households and who lack adequate job skills;

"(iii) persons who are currently homemakers and part-time workers but who wish to secure a full-time job; and

"(iv) women who are now in jobs which have been traditionally considered jobs for females and who wish to seek employment in job areas which have not been traditionally considered for job areas for females, and men who are now in jobs which have been traditionally considered jobs for males and who wish to seek employment in job areas which have not been traditionally considered job areas for males; and

"(M) construction and operation of residential vocational schools as described in section 124.

"(2) No funds shall be used for the purposes specified in subparagraph (G) or (H) of paragraph (1) unless the State board first makes a specific finding in each instance of funding that the funding of this particular activity is necessary due to inadequate funding in other programs providing similar activities or due to the fact that other services in the area are inadequate to meet the needs.

"WORK STUDY PROGRAMS

"SEC. 121. (a) Funds available to the States under section 120 may be used for grants to local educational agencies for work-study programs which—

"(1) are administered by the local educational agencies and are made reasonably available (to the extent of available funds) to all youths in the area served by such agency who are able to meet the requirements of paragraph (2);

"(2) provide that employment under such work-study programs shall be furnished only to a student who (A) has been accepted for enrollment as a full-time student in a vocational education program which meets the standards prescribed by the State board and the local educational agency for vocational education programs assisted under this Act, or in the case of a student already enrolled in such a program, is in good standing and in full-time attendance, (B) is in need of the earnings from such employment to commence or continue his vocational education program, and (C) is at least fifteen years of age and less than twenty-one years of age at the commencement of his employment, and is capable, in the opinion of the appropriate school authorities, of maintaining good standing in his vocational education program while employed under the work-study program;

"(3) provide that, pursuant to regulations of the Commissioner, no student shall be employed under such work-study program for more than a reasonable number of hours in any week in which classes in which he is enrolled are in session, or for compensation which exceeds payments under comparable Federal programs, unless the student is attending a school that is not within a reasonable commuting distance from his home, when the compensation may be set by the Commissioner at a higher level;

"(4) provide that employment under such work-study program shall be for the local educational agency or for some other public or nonprofit private agency or institution; and

"(5) provide that, in each fiscal year during which such program remains in effect, such agency shall expend (from sources other than payments from Federal funds under this section) for the employment of its students (whether or not in employment eligible for assistance under this section) an amount that is not less than its average annual expenditure for work-study programs of a similar character during the three fiscal years preceding the fiscal year in which its work-study program under this section is approved.

"(b) Each State in operating work-study programs from funds made available under section 120 shall—

"(1) adopt policies and procedures which assure that Federal funds used for this purpose will be expended solely for the payment or compensation of students employed pursuant to the work-study programs meeting the requirements of subsection (a); and

"(2) set forth principles for determining the priority to be accorded applications from local educational agencies for work-study programs, which principles shall give preference to applications submitted by local educational agencies serving communities having substantial numbers of youths who have dropped out of school or who are unemployed, and provide for undertaking such programs, insofar as financial resources available therefor make possible, in the order determined by the application of such principles.

"(c) Students employed in work-study programs assisted pursuant to this section shall not by reason of such employment be deemed employees of the United States, or their service Federal service, for any reason.

"COOPERATIVE VOCATIONAL EDUCATION PROGRAMS

"SEC. 122. Funds available to the States under section 120 may be used for establishing or expanding cooperative vocational education programs through local educational agencies with the participation of public and private employers. Such programs shall include provisions assuring that—

"(a) funds will be used only for developing and operating cooperative vocational programs as defined in section 195(18) which provide training opportunities that may not otherwise be available and which are designed to serve persons who can benefit from such programs;

"(b) necessary procedures are established for cooperation with employment agencies, labor groups, employers, and other community agencies in identifying suitable jobs for persons who enroll in cooperative vocational education programs;

"(c) provision is made, where necessary, for reimbursement of added costs to employers for on-the-job training of students enrolled in cooperative programs, provided such on-the-job training is related to existing career opportunities susceptible of promotion and advancement and which do do not displace other workers who perform such work;

"(d) ancillary services and activities to assure quality in cooperative vocational education programs are provided for, such as preservice and inservice training for teacher coordinators, supervision, curriculum materials, travel of students and coordinators necessary to the success of such programs, and evaluation;

"(e) priority for funding cooperative vocational education programs through local educational agencies is given to areas that have high rates of school dropouts and youth unemployment;

"(f) to the extent consistent with the number of students enrolled in nonprofit private schools in the area to be served, whose educational needs are of the type which the program or project involved is to meet, provision has been made for the participation of such students;

"(g) Federal funds used for the purposes of this section will not be commingled with State or local funds; and

"(h) such accounting, evaluation, and followup procedures as the Commissioner deems necessary will be provided.

"ENERGY EDUCATION

"SEC. 123. (a) (1) Funds available to States under section 120 may be used to make grants to postsecondary educational institutions to carry out programs for the training of miners, supervisors, technicians (particularly safety personnel), and environmentalists in the field of coal mining and coal mining technology, including acquisition of equipment necessary for the conduct of such program.

"(2) Grants made under this section shall be made pursuant to applications which describe with particularity a program for the training of miners, supervisors, and technicians in the field of coal mining and coal mining technology, including provision for supplementary demonstration projects or short-term seminars, which program may include such curriculums as (A) the extraction, preparation, and transportation of coal, (B) the reclamation of coal mined land, (C) the strengthening of health and safety programs for coal mine employees, (D) the disposal of coal mine wastes, and (E) the chemical and physical analysis of coal and materials, such as water and soil, that are involved in the coal mining process.

"(b) Funds available under section 120 may also be used to make grants to postsecondary educational institutions to carry out programs for the training of individuals needed for the installation of solar energy equipment, including training necessary for the installation of glass paneled solar collectors and of wind energy generators, and for the installation of other related applications of solar energy.

"RESIDENTIAL VOCATIONAL SCHOOLS

"SEC. 124. (a) Funds available to the States under section 120 may be used for the construction, equipment, and operation of residential schools to provide vocational education (including room, board, and other necessities) for youths, at least fifteen years of age and less than twenty-one years of age at the time of enrollment, who need full-time study on a residential basis in order to benefit fully from such education. In using funds available under section 120 for this purpose, the States shall give special consideration to the needs of large urban areas and isolated rural areas having substantial numbers of youths who have dropped out of school or who are unemployed.

"(b) No funds made available under section 120 may be used for the purposes of this section for residential vocational schools to which juveniles are assigned as the result of their delinquent conduct or in which the students are segregated because of race.

"Subpart 3—Program Improvement and Supportive Services

"AUTHORIZATION OF GRANTS AND USES OF FUNDS

"SEC. 130. (a) From the sums made available for grants under this subpart pursuant to section 103 the Commissioner is authorized to make grants to States to assist them in improving their vocational education programs and in providing supportive services for such programs in accordance with the provisions of this subpart.

"(b) Grants to States under this subpart may be used, in accordance with five-year State plans, and annual program plans approved pursuant to section 109, for the following purposes:

"(1) research programs as described in section 131;

"(2) exemplary and innovative programs as described in section 132;

"(3) curriculum development programs as described in section 133;

"(4) provision of guidance and counseling services, programs, and activities as described in section 134;

"(5) provision of pre-service and in-service training as described in section 135; and

"(6) grants to overcome sex bias as described in section 136.

"RESEARCH

"SEC. 131. (a) Funds available to the States under section 130(a) may be used for support of State research coordination units and for contracts by those units pursuant to comprehensive plans of program improvement involving—

"(1) applied research and development in vocational education;

"(2) experimental, developmental, and pilot programs and projects designed to test the effectiveness of research findings, including programs and projects to overcome problems of sex bias and sex stereotyping;

"(3) improved curriculum materials for presently funded programs in vocational education and new curriculum materials for new and emerging job fields, including areview and revision of any curricula developed under this section to insure that such curricula do not reflect stereotypes based on sex, race, or national origin;

"(4) projects in the development of new careers and occupations, such as—

"(A) research and experimental projects designed to identify new careers in such fields as mental and physical health, crime prevention and correction, welfare, education, municipal services, child care, and recreation, requiring less training than professional positions, and to delineate within such career roles with the potential for advancement from one level to another;

"(B) training and development projects designed to demonstrate improved methods of securing the involvement, cooperation, and commitment of both the public and private sectors toward the end of achieving greater coordination and more effective implementation of programs for the employment of persons in the fields described in subparagraph (A), including programs to prepare professionals (including administrators) to work effectively with aides; and

"(C) projects to evaluate the operation of programs for the training, development, and utilization of public service aides, particularly their effectiveness in providing satisfactory work experiences and in meeting public needs;

and

"(5) dissemination of the results of the contracts made pursuant to paragraphs (1) through (4), including employment of persons to act as disseminators, on a local level, of these results.

"(b) No contract shall be made pursuant to subsection (a) unless the applicant can demonstrate a reasonable probability that the contract will result in improved teaching techniques or curriculum materials that will be used in a substantial number of classrooms or other learning situations within five years after the termination date of such contract.

"EXEMPLARY AND INNOVATIVE PROGRAMS

"SEC. 132. (a) Funds available to the States under section 130(a) may be used for contracts, as part of the comprehensive plans of program improvement mentioned in section 131(a), for the support of exemplary and innovative programs, including—

"(1) programs designed to develop high quality vocational education programs for urban centers with high concentrations of economically disadvantaged individuals, unskilled workers, and unemployed individuals;

"(2) programs designed to develop training opportunities for persons in sparsely populated rural areas and for individuals migrating from farms to urban areas;

"(3) programs of effective vocational education for individuals with limited English-speaking ability;

"(4) establishment of cooperative arrangements between public education and manpower agencies, designed to correlate vocational education opportunities with current and projected needs of the labor market; and

"(5) programs designed to broaden occupational aspirations and opportunities for youth, with special emphasis given to youth who have academic, socioeconomic, or other handicaps, including—

"(A) programs and projects designed to familiarize elementary and secondary school students with the broad range of occupations for which special skills are required, and the requisites for careers in such occupations; and

"(B) programs and projects to facilitate the participation of employers and labor organizations in postsecondary vocational education.

"(b) Every contract made by a State for the purpose of funding exemplary and innovative projects shall give priority to programs and projects designed to reduce sex stereotyping in vocational education and shall, to the extent consistent with the number of students enrolled in nonprofit private schools in the area to be served whose educational needs are of the type which the program or project involved is to meet, provide for the participation of such students; and such contract shall also provide that the Federal funds will not be commingled with State or local funds.

"(c) The annual program plan and accountability report covering the final year of financial support by the State for any such program or project shall indicate the proposed disposition of the program or project following the cessation of Federal support and the means by which successful or promising programs or projects will be continued and expanded within the State.

"CURRICULUM DEVELOPMENT

"SEC. 133. (a) Funds available to the States under section 130(a) may be used for contracts for the support of curriculum development projects, including—

"(1) the development and dissemination of vocational education curriculum materials for new and changing occupational fields and for individuals with special needs, as described in section 110, and

"(2) the development of curriculum and guidance and testing materials designed to overcome sex bias in vocational education programs, and support services designed to enable teachers to meet the needs of individuals enrolled in vocational education programs traditionally limited to members of the opposite sex,

"(b) No contract shall be made pursuant to subsection (a) unless the applicant can demonstrate a reasonable probability that the contract will result in improved teaching techniques or curriculum materials that will be used in a substantial number of classrooms or other learning situations within five years after the termination date of such contract.

"VOCATIONAL GUIDANCE AND COUNSELING

"SEC. 134. (a) Not less than 20 per centum of the funds available to the States under section 130(a) shall be used to support programs for vocational development guidance and counseling programs and services which, subject to the provisions of subsection (b), shall include——

"(1) initiation, implementation, and improvement of high quality vocational guidance and counseling programs and activities;

"(2) vocational counseling for children, youth, and adults, leading to a greater understanding of educational and vocational options;

"(3) provision of educational and job placement services, including programs to prepare individuals for professional occupations or occupations requiring a baccalaureate or higher degree, including followup services;

"(4) vocational guidance and counseling training designed to acquaint guidance counselors with (A) the changing work patterns of women, (B) ways of effectively overcoming occupational sex stereotyping, and (C) ways of assisting girls and women in selecting careers solely on their occupational needs and interests, and to develop improved career counseling materials which are free;

"(5) vocational and educational counseling for youth offenders and adults in correctional institutions;

"(6) vocational guidance and counseling for persons of limited English-speaking ability;

"(7) establishment of vocational resource centers to meet the special needs of out-of-school individuals, including individuals seeking second careers, individuals entering the job market late in life, handicapped individuals, individuals from economically depressed communities or areas, and early retirees; and

"(8) leadership for vocational guidance and exploration programs at the local level.

"(b) Each State which chooses to fund activities described in paragraph (1) or (2) of subsection (a) of this section shall use those funds, insofar as is practicable, for funding programs, services, or activities by eligible recipients which bring individuals with experience in business and industry, the professions, and other occupational pursuits into schools as counselors or advisors for students, and which bring students into the work establishments of business and industry, the professions, and other occupational pursuits for the purpose of acquainting students with the nature of the work that is accomplished therein, and for funding projects of such recipients in which guidance counselors obtain experience in business and industry, the professions, and other occupational pursuits which will better enable those counselors to carry out their guidance and counseling duties.

"VOCATIONAL EDUCATION PERSONNEL TRAINING

"SEC. 135. (a) Funds available to the States under section 130(a) may be used to support programs or projects designed to improve the qualifications of persons serving or preparing to serve in vocational education programs, including teachers, administrators, supervisors, and vocational guidance and counseling personnel, including programs or projects—

"(1) to train or retrain teachers, and supervisors and trainers of teachers, in vocational education in new and emerging occupations;

"(2) which provide in-service training for vocational education teachers and other staff members, to improve the quality of instruction, supervision, and administration of vocational education programs, and to overcome sex bias in vocational education programs;

"(3) which provide for exchange of vocational education teachers and other personnel with skilled workers or supervisors in business, industry, and agriculture (including mutual arrangements for preserving employment and retirement status and other employment benefits during the period of exchange), and the development and operation of cooperative programs involving periods of teaching in schools providing vocational education and of experience in commercial, industrial, or other public or private employment related to the subject matter taught in such school;

"(4) to prepare journeymen in the skilled trades or occupations for teaching positions;

"(5) to train and to provide in-service training for teachers and supervisors and trainers of teachers in vocational education to improve the quality of instruction, supervision, and administration of vocational education for persons with limited English-speaking ability and to train or retrain counseling and guidance personnel to meet the special needs of persons with limited English-speaking ability; and

"(6) which provide short-term or regular-session institutes designed to improve the qualifications of persons entering or reentering the field of vocational education in new and emerging occupational areas in which there is a need for such personnel.

"(b) A State may include in the terms of any grant or contract under this section provisions authorizing the payment, to persons participating in the training programs supported under this section, of such stipends (including allowances for subsistence and other expenses for such persons and their dependents) as the Commissioner may determine, pursuant to regulations, consistent with prevailing practices under comparable programs.

"GRANTS TO ASSIST IN OVERCOMING SEX BIAS

"SPECIAL FUNDS FOR THE DISADVANTAGED

"SEC. 136. Funds available to the States under section 130(a) may be used to support activities which show promise of overcoming sex stereotyping and bias in vocational education.

"Subpart 4 — Special Programs for the Disadvantaged

"SPECIAL PROGRAMS FOR THE DISADVANTAGED

"SEC. 140. (a) From the sums made available for grants under this subpart pursuant to sections 102 and 103, the Commissioner is authorized to make grants to States to assist them in conducting special programs for the disadvantaged (as defined in section 195 (16)) in accordance with the requirements of this subpart.

"(b) (1) Grants to States under this subpart shall be used, in accordance with the five-year State plans and annual program plans approved pursuant to section 109, for allocation within the State to areas of high concentrations of youth unemployment and school dropouts, and shall be used to pay the full cost of vocational education for disadvantaged persons.

"(2) Such funds may be granted to eligible recipients only if (A) to the extent consistent with the number of students enrolled in nonprofit private schools in the area to be served whose educational needs are of the type which the program or project involved is to meet, provision has been made for the participation of such students, and (B) effective policies and procedures have been adopted which assure that Federal funds made available under this subpart to accomodate students in nonprofit private schools will not be commingled with State or local funds.

"Subpart 5— Consumer and Homemaking Education

"CONSUMER AND HOMEMAKING EDUCATION

"SEC. 150. (a) From the sums made available for grants under this subpart pursuant to sections 102 and 103, the Commissioner is authorized to make grants to States to assist them in conducting consumer and homemaking education programs.

"(b) Grants to States under this subpart may be used, in accordance with five-year State plans and annual program plans approved pursuant to section 109, solely for (1) educational programs in consumer and homemaking education consisting of instructional programs, services, and activities at all educational levels for the occupations of homemaking including but not limited to, consumer education, food and nutrition, family living and parenthood education, child development and guidance, housing and home management (including resource management), and clothing and textiles which (A) encourage participation of both males and females to prepare for combining the roles of homemakers and wage earners; (B) encourage elimination of sex stereotyping in consumer and homemaking education by promoting the development of curriculum materials which deal (i) with increased numbers of women working outside the home, and increased numbers of men assuming homemaking responsibilities and the changing career patterns for women and men and (ii) with appropriate Federal and State laws relating to equal opportunity in education and employment; (C) give greater consideration to economic, social, and cultural conditions and needs especially in economically depressed areas and such courses may include where appropriate bilingual instruction; (D) encourage outreach programs in communities for youth and adults giving considerations to special needs such as, but not limited to, aged, young children, school-age parents, single parents, handicapped persons, educationally disadvantaged persons, and programs connected with health care delivery systems, and programs providing services for courts and correctional institutions; (E) prepare males and females who have entered or are preparing to enter the work of the home; (F) emphasize consumer education, management of resources, promotion of nutritional knowledge and food use, and parenthood education to meet the current societal needs, and (2) ancillary services, activities and other means of assuring quality in all homemaking education programs such as teacher training and supervision, curriculum development, research, program evaluation, special demonstration, and experimental programs, development of instructional materials, exemplary projects, provision of equipment, and State administration and leadership.

"(c) Notwithstanding the provisions contained in section 111(a), from a State's allotment determined under section 103 for any fiscal year from the funds appropriated pursuant to section 102(c), the Commissioner shall pay to such State an amount equal to 50 per centum of the amount expended for the purposes set forth in subsection (b), except that the Commissioner shall pay an amount to each State equal to 90 per centum of the amount used in areas described in subsection (d).

"(d) At least one-third of the Federal funds made available under this section to each State shall be used in economically depressed areas or areas with high rates of unemployment for programs designed to assist consumers and to help improve home environments and the quality of family life.

"PART B — NATIONAL PROGRAMS

"Subpart 1 — General Provisions

"FEDERAL ADMINISTRATION

"SEC. 160. (a) There is established in the United States Office of Education a Bureau of Occupational and Adult Education (hereinafter in this Act referred to as the 'Bureau'), which shall be responsible for (1) the administration of all the programs authorized by this Act and the Adult Education Act, (2) functions of the Office of Education relating to manpower training and development, (3) functions of that Office relating to postsecondary vocational, technical, and occupational training funded under this Act, (4) the administration of any other Act of Congress vesting authority in the Commissioner for vocational, occupational, and adult education, and (5) the administration of those portions of any Act of Congress relating to career education which are relevant to the purposes of other Acts of Congress administered by the Bureau.

"(b) (1) The Bureau shall be headed by a person (appointed or designated by the Commissioner) who is highly qualified in the fields of vocational, technical, and occupational education, who is accorded the rank of Deputy Commissioner, and who shall be compensated at the rate specified for grade 18 of the General Schedule set forth in section 5332 of title 5, United States Code.

"(2) Additional positions are created for, and shall be assigned to, the Bureau as follows:

"(A) three positions to be placed in grade 17 of such General Schedule, one of which shall be filled by a person with broad experience in the field of junior and community college education,

"(B) seven positions to be placed in grade 16 of such General Schedule, at least two of which shall be filled by persons with broad experience in the field of postsecondary-occupational education in community and junior colleges, at least one of which shall be filled by a person with broad experience in education in private proprietary institutions, and at least one of which shall be filled by a person with professional experience in occupational guidance and counseling, and

"(C) three positions which shall be filled by persons at least one of whom is a skilled worker in a recognized occupation, another is a subprofessional technician in one of the branches of engineering, and the other is a subprofessional worker in one of the branches of social or medical services, who shall serve as senior advisers in the administration of the programs in the Bureau.

"(3) The Commissioner shall assign to the Bureau, by the end of fiscal year 1978, at least 50 per centum more persons to directly administer the programs authorized under this Act than were assigned to directly administer this Act during fiscal year 1976.

"VOCATIONAL EDUCATION DATA AND OCCUPATIONAL INFORMATION DATA SYSTEMS

"SEC. 161. (a) (1) The Commissioner and the Administrator of the National Center for Education Statistics shall, by September 30, 1977, jointly develop information elements and uniform definitions for a national vocational education data reporting and accounting system. This system shall include information resulting from the evaluations required to be conducted by section 112 (as such section will be in effect on October 1, 1977) and other information on vocational—

"(A) students (including information on their race and sex),
"(B) programs,
"(C) program completers and leavers,
"(D) staff,
"(E) facilities, and
"(F) expenditures.

"(2) In developing this system, the Commissioner and the Administrator shall endeavor as much as possible to make the system compatible with the occupational information data system developed pursuant to subsection (b) and other information systems involving data on programs assisted under the Comprehensive Employment and Training Act of 1973.

"(3) (A) After the completion of the development of these information elements and uniform definitions pursuant to paragraph (1), the Administrator shall immediately begin to design, implement, and operate this information system which shall be in full operation for the fiscal year beginning October 1, 1977.

"(B) Any State receiving assistance under this Act shall cooperate with the Administrator in supplying the information required to be submitted by the Administrator and shall comply in its reports with the information elements and definitions developed jointly by the Administrator and the Comissioner pursuant to paragraph (1). Each State shall submit this data to the Administrator in whatever form he requires; and, whenever possible, this reporting shall include reporting of data by labor market areas within the State.

"(4) The Administrator shall have the responsibility for updating this national vocational education information and accounting system and for preparing annual acquisition plans of data for operating this system. These plans shall be submitted to the Commissioner for his review and comment.

"(b) (1) There is hereby established a National Occupational Information Coordinating Committee which shall consist of the Commissioner, the Administrator, the Commissioner of Labor Statistics, and the Assistant Secretary for Employment and Training. This Committee, with funds available to it under section 103(a) (as such section will be in effect on October 1, 1977), shall—

"(A) in the use of program data and employment data, improve coordination between, and communication among, administrators and planners of programs authorized by this Act and by the Comprehensive Employment and Training Act of 1973, employment security agency administrators, research personnel, and employment and training planning and administering agencies at the Federal, State, and local levels;

"(B) develop and implement, by September 30, 1977, an occupational information system to meet the common occupational information needs of vocational education programs and employment and training programs at the national, State, and local levels, which system shall include data on occupational demand and supply based on uniform definitions, standardized estimating procedures, and standardized occupational classifications; and

"(C) assist State occupational information coordinating committees established pursuant to paragraph (2).

"(2) By September 30, 1977, each State receiving assistance under this Act and under the Comprehensive Employment and Training Act of 1973 shall establish a State occupational information coordinating committee composed of representatives of the State board, the State employment security agency, the State Manpower Services Council, and the agency administering the vocational rehabilitation program. This committee shall, with funds available to it from the National Coordinating Committee established pursuant to paragraph (1), implement an occupational information system in the State which will meet the common needs for the planning for, and the operation of, programs of the State board assisted under this Act and of the administering agencies under the Comprehensive Employment and Training Act of 1973.

"NATIONAL ADVISORY COUNCIL ON VOCATIONAL EDUCATION

"SEC. 162. (a) The National Advisory Council on Vocational Education, established pursuant to section 104(a) of the Vocational Education Act of 1963, in effect prior to the enactment of the Education Amendments of 1976, shall continue to exist during the period for which appropriations are authorized under this Act. Individuals who are members of the Council on the date of the enactment of this Act may continue to serve for the terms for which they were appointed. Members appointed to succeed such individuals shall be appointed by the President for terms of three years. The Council shall consist of twenty-one members, each of whom shall be designated as representing one of the categories set forth in the following sentence. The National Advisory Council shall include individuals—

"(1) representative of labor and management, including persons who have knowledge of semiskilled, skilled, and technical employment;

"(2) representative of new and emerging occupational fields;

"(3) knowledgeable in the field of vocational guidance and counseling;

"(4) representing the National Commission for Manpower Policy created pursuant to title V of the Comprehensive Employment and Training Act of 1973;

"(5) representing nonprofit private schools;

"(6) who are women with backgrounds and experiences in employment and training programs, who are knowledgeable with respect to problems of sex discrimination in job training and in employment, including women who are members of minority groups and who have, in addition to such backgrounds and experiences, special knowledge of the problems of discrimination in job training and employment against women who are members of such groups;

"(7) knowledgeable about the administration of State and local vocational education programs, including members of school boards and private institutions;

"(8) experienced in the education and training of handicapped persons and of persons of limited English-speaking ability (as defined in section 703(a) of the Elementary and Secondary Education Act of 1965);

"(9) familiar with the special problems and needs of individuals disadvantaged by their socioeconomic backgrounds;

"(10) having special knowledge of postsecondary and adult vocational education programs;

"(11) familiar with the special problems of individuals in correctional institutions; and

"(12) representative of the general public who are not Federal employees, including parents and students, except that they must not be representative of categories (1) through (11), and who shall constitute not less than one-third of the total membership.

The National Council shall have as a majority of its members persons who are not educators or adminstrators in the field of education. In appointing the National Advisory Council, the President shall insure that there is appropriate representation of both sexes, racial and ethnic minorities, and the various geographic regions of the country. The President shall select the chairman. The National Advisory Council shall meet at the call of the Chairman, but not less than four times a year.

"(b) The National Advisory Council shall—

"(1) advise the President, Congress, Secretary, and Commissioner concerning the administration of, preparation of general regulations and budget requests for, and operation of, vocational education programs supported with assistance under this Act;

"(2) review the administration and operation of vocational education programs under this Act, and other pertinent laws affecting vocational education and manpower training (including the effectiveness of such programs in meeting the purposes for which they are established and operated), make recommendations with respect thereto, and make annual reports of its findings and recommendations (including recommendations for changes in the provisions of this Act and such other pertinent laws) to the President, Congress, Secretary, and Commissioner;

"(3) make such other reports or recommendations to the President Congress, Secretary, Commissioner, or head of any other Federal department or agency as it may deem desirable;

"(4) (A) identify, after consultation with the National Commission for Manpower Policy, the vocational education and employment and training needs of the Nation and assess the extent to which vocational education, employment training, vocational rehabilitation, and other programs under this and related Acts represent a consistent, integrated, and coordinated approach to meeting such needs; and (B) comment, at least once annually, on the reports of the National Commission, which comments shall be included in one of the reports submitted by the National Advisory Council pursuant to this section and in one of the reports submitted by the National Commission pursuant to section 505 of the Comprehensive Employment and Training Act of 1973;

"(5) conduct such studies, hearings, or other activities as it deems necessary to enable it to formulate appropriate recommendations;

"(6) conduct independent evaluations of programs carried out under this Act and publish and distribute the results thereof; and

"(7) provide technical assistance and leadership to State advisory councils established pursuant to section 105, in order to assist them in carrying out their responsibilities under this Act.

"(c) There are authorized to be appropriated $450,000 for the fiscal year ending September 30, 1978, $475,000 for the fiscal year ending September 30, 1979, and $500,000 for each of the fiscal years ending prior to September 30, 1982 for the purposes of this paragraph. The Council is authorized to use the funds appropriated pursuant to the preceding sentence to carry out its function as set forth in this section and to engage such technical assistance as may be required to assist it in performing these functions.

"Subpart 2—Programs of National Significance

"PROGRAM IMPROVEMENT

"SEC. 171. (a) Funds reserved to the Commissioner under section 103 for programs under this part shall be used primarily for contracts, and in some cases for grants, for—

"(1) activities authorized by sections 131, 132, 133, 134, 135, and 136, if such activities are deemed to be of national significance by the Commissioner;

"(2) support of a national center for research in vocational education, chosen once every five years, which center shall be a nonprofit agency, shall be assisted by an advisory committee appointed by the Commissioner, shall have such locations, including contracts with one or more regional research centers, as shall be determined by the Commissioner after consultation with the national center and its advisory committee taking into consideration the vocational education research resources available, geographical area to be served and the schools, programs, projects, and students and areas to be served by research activities, and shall, either directly or through other public agencies—

"(A) conduct applied research and development on problems of national significance in vocational education;

"(B) provide leadership development through an advanced study center and inservice education activities for State and local leaders in vocational education;

"(C) disseminate the results of the research and development projects funded by the center;

"(D) develop and provide information to facilitate national planning and policy development in vocational education;

"(E) (i) act as a clearinghouse for information on contracts made by the States pursuant to section 131, section 132, and section 133 and on contracts made by the Commissioner pursuant to this section; and (ii) compile an annotated bibliography of research, exemplary and innovative program projects, and curriculum development projects assisted with funds made available under this Act since July 1, 1970; and

"(F) work with States, local educational agencies, and other public agencies in developing methods of evaluating programs, including the follow-up studies of program completers and leavers required by section 112, so that these agencies can offer job training programs which are more closely related to the types of jobs available in their communities, regions, and States; and

"(3) training and development programs as described in section 172.

"(b) (1) The Commissioner shall not make a grant pursuant to paragraph (1) of subsection (a) unless the applicant can demonstrate a reasonable probability that such grant will result in improved teaching techniques or curriculum materials that will be used in a substantial number of classrooms or other learning situations within five years after the termination date of such grant.

"(2) Every contract made by the Commissioner for the purpose of funding exemplary and innovative projects pursuant to paragraph (1) of subsection (a) shall, to the extent consistent with the number of students enrolled in nonprofit private schools in the area to be served whose educational needs are of the type which the project involved is to meet, provide for the participation of such students; and such contract shall also provide that the Federal funds will not be commingled with State or local funds.

"(3) The Commissioner shall, from the funds made available to him under this section, make contracts to convert to use in local educational agencies, in private nonprofit schools, and in other public agencies, curriculum materials involving job preparation which have been prepared for use by the armed services of the United States.

"(4) There is hereby established a Coordinating Committee on Research in Vocational Education within the Education Division of the Department of Health, Education, and Welfare which shall be composed of the Director of the National Institute of Education, the Commissioner, and the Director of the Fund for the Improvement of Postsecondary Education, or their representatives. This Committee shall—

"(A) develop a plan for each fiscal year (i) establishing national priorities for the use of funds available to these agencies for vocational education research, career education research, education and work research, development, exemplary and innovative program projects, and curriculum development projects; and (ii) coordinating the efforts of these agencies in seeking to achieve these national priorities in order to avoid duplication of effort; and

"(B) develop an effective management information system on the projects funded pursuant to this plan in order to achieve the best possible monitoring and evaluation of these projects and the widest possible dissemination of their results.

"(5) (A) From the sums reserved to the Commissioner under section 103 for this part, the Commissioner may pay all or part of the costs of contracts and grants authorized by this section.

"(B) Funds reserved for contracts and grants under this section shall be available for expenditure until expended, unless a law is enacted in specific restriction of this subsection; and these funds may be used for contracts and grants for a period not to exceed three fiscal years.

"TRAINING AND DEVELOPMENT PROGRAMS FOR VOCATIONAL EDUCATION PERSONNEL

"SEC. 172. (a) From funds available to him under section 103, the Commissioner shall provide (1) opportunities for experienced vocational educators to spend full time in advanced study of vocational education for a period not to exceed three years in length; (2) opportunities for certified teachers who have been trained to teach in other fields to become vocational educators, if those teachers have skills and experience in vocational fields for which they can be trained to be vocational educators; and (3) opportunities for persons in industry who have skills and experience in vocational fields for which there is a need for vocational educators, but who do not necessarily have baccalaureate degrees, to become vocational educators.

"(b) (1) In order to meet the needs in all States for qualified vocational education personnel (such as administrators, supervisors, teacher educators, researchers, guidance and counseling personnel, and instructors in vocational education programs) the Commissioner shall make available leadership development awards in accordance with the provisions of this subsection only upon his determination that—

"(A) persons selected for awards have had not less than two years of experience in vocational education or in industrial training, or military technical training; or, in the case of researchers, experience in social science research which is applicable to vocational education;

"(B) persons receiving such awards are currently employed or are reasonably assured of employment in vocational education and have successfully completed, as a minimum, a baccalaureate degree program; and

"(C) persons selected are recommended by their employer, or others, as having leadership potential in the field of vocational education and are eligible for admission as a graduate student to a program of higher education approved by the Commission under paragraph (2).

"(2) (A) The Commissioner shall, for a period not to exceed three years, pay to persons selected for leadership development awards such stipends (including such allowances or subsistence and other expenses for such persons and their dependents) as he may determine to be consistent with prevailing practices under comparable federally supported programs.

"(B) The Commissioner shall, in addition to the stipends paid to persons under subparagraph (A), pay to the institution of higher education at which such person is pursuing his course of study such amount as the Commissioner may determine to be consistent with the prevailing practices under comparable federally supported programs not to exceed the equivalent of $4,500 per person per academic year or its equivalent, and $1,000 per person per summer session or its equivalent, but any amount charged such person for tuition and nonrefundable fees and deposits shall be deducted from the amount payable to the institution of higher education under this subsection. Any funds from grants received under this paragraph which remain after deducting normal tuition fees, and deposits attributable to such students, shall be used by the institution receiving such funds for the purpose of improving the program of vocational education offered by that institution.

"(3) The Commissioner shall approve the vocational education leadership development program of an institution of higher education only upon finding that—

"(A) the institution offers a comprehensive program in vocational education with adequate supporting services and disciplines such as education administration, guidance and counseling, research, and curriculum development;

"(B) such program is designed to further substantially the objective of improving vocational education through providing opportunities for graduate training of vocational education teachers, supervisors, and administrators, and of university level vocational education teacher educators and researchers; and

"(C) such programs are conducted by a school of graduate study in the institution of higher education.

"(4) In order to meet the needs for qualified vocational education personnel such as teachers, administrators, supervisors, and teacher educators, in vocational education programs in all the States, the Commissioner in carrying out this section shall apportion leadership development awards equitably among the States, taking into account such factors as the State's vocational education enrollments, and the incidence of youth unemployment and school dropouts in the State.

"(5) Persons receiving leadership awards under the provisions of this subsection shall continue to receive the payments provided in paragraph (3) only during such periods as the Commissioner finds that they are maintaining satisfactory proficiency in, and devoting essentially full time to, study or research in the field of vocational education in an institution of higher education, and are not engaging in gainful employment, other than part-time employment by such institution in teaching, research, or similar activities, approved by the Commissioner.

"(6) From the funds reserved to the Commissioner pursuant to section 103 for this part, the Commissioner shall make awards meeting the requirements of paragraphs (1) through (5) of this subsection.

"(7) In approving training and development programs for vocational education personnel, the Commissioner shall give special consideration to programs which are designed to familiarize awardees with new curricular materials in vocational education.

"(8) For purposes of this subsection, the term 'institution of higher education' means any such institution as defined under section 1201 the Higher Education Act of 1965.

"(c) (1) In order to meet the need to provide adequate numbers of teachers and related classroom instructors in vocational education and in order to take full advantage of the education which has been provided to already certified teachers who are unable to find employment in their fields of training and of individuals employed in industry who have skills and experiences in vocational fields, the Commissioner shall make available fellowships in accordance with the provisions of this subsection to such individuals upon his determination that—

> "(A) individuals selected for such fellowships are presently certified, or had been so certified within the last ten years, by a State as teachers in elementary and secondary schools or in community and junior colleges, and have past or current skills and experiences in vocational fields for which they can be trained to be vocational educators; or
>
> "(B) individuals selected for such fellowships are individuals employed in industry (who need not be baccalaureate degree holders) who have skills and experiences in vocational fields for which there is a need for vocational educators, and that individuals receiving such awards have been accepted by a teacher training institution in a program to assist those persons in gaining the skills to become a vocational educator.

"(2) (A) The Commissioner shall, for a period not to exceed two years, pay to persons selected for fellowships under this subsection stipends (including such allowances for subsistence and other expenses for such person and their dependents) as he may determine to be consistent with prevailing practices under comparable federally supported programs.

"(B) The Commissioner shall, in addition to the stipends paid to persons under paragraph (1), pay to the institution of higher education at which such person is pursuing his course of study such amount as the Commissioner may determine to be consistent with the prevailing practices under comparable federally supported programs not to exceed the equivalent of $4,500 per person per academic year or its equivalent, and $1,000 per person per summer session or its equivalent, but any amount charged such person for tuition and nonrefundable fees and deposits shall be deducted from the amount payable to the institution of higher education under this subsection. Any funds from grants received under this paragraph which remain after deducting normal tuition, fees, and deposits attributable to such students, shall be used by the institution receiving such funds for the purpose of improving the program of vocational education offered by that institution.

"(3) The Commissioner shall approve the program at an institution of higher education which has as its purpose assisting certified teachers or assisting persons from industry in becoming vocational education teachers only upon finding that—

"(A) the institution offers a comprehensive program in vocational education with adequate supporting services and disciplines such as education administration, guidance and counseling, research, and curriculum development; and

"(B) such program is available to persons receiving these fellowships so that they can receive the same type of education and training being offered in the institution for undergraduate students who are preparing to become vocational education teachers.

"(4) In order to meet the needs for qualified vocational education teachers in vocational education programs in all the States, the Commissioner in carrying out this subsection shall apportion fellowships equitably among the States, taking into account such factors as the State's vocational education enrollments, and the incidence of youth unemployment and school dropouts in the State.

"(5) Persons receiving fellowships under the provisions of this subsection shall continue to receive the payments provided in paragraph (2) only during such periods as the Commissioner finds that they are maintaining satisfactory proficiency in, and devoting essentially full time to, study or research in the field of vocational education in an institution of higher education, and are not engaging in gainful employment, other than part-time employment by such institution in teaching, research, or similar activities, approved by the Commissioner.

"(6) From the funds reserved to the Commissioner pursuant to section 103 for this part, the Commissioner shall make awards meeting the requirements of paragraphs (1) through (5) of this subsection.

"(7) In carrying out this subsection, the Commissioner shall, before the beginning of each fiscal year, publish a listing of the areas of teaching in vocational education which are presently in need of additional personnel and of the areas which will have need of additional personnel in the future; and the Commissioner shall, in making the fellowships under the authority of this subsection, grant these fellowships, to the maximum degree possible, to persons who are seeking to become teachers in the areas identified by the Commissioner as needing additional teachers.

"Subpart 3—Bilingual Vocational Training

"STATEMENT OF FINDINGS

"SEC. 181. The Congress hereby finds that one of the most acute problems in the United States is that which involves millions of citizens, both children and adults, whose efforts to profit from vocational education are severely restricted by their limited English-speaking ability because they came from environments where the dominant language is other than English; that such persons are therefore unable to help to fill the critical need for more and better educated personnel in vital occupational categories; and that such persons are unable to make their maximum contribution to the Nation's economy and must, in fact, suffer the hardships of unemployment or underemployment. The Congress further finds that there is a critical shortage of instructors possessing both the job knowledge and skills and the dual language capabilities required for adequate vocational instruction of such language-handicapped persons and to prepare such persons to perform adequately in a work environment requiring English language skills, and a corresponding shortage of instructional materials and of instructional methods and techniques suitable for such instruction.

"GENERAL RESPONSIBILITIES OF THE COMMISSIONER

"SEC. 182. (a) The Commissioner and the Secretary of Labor together shall—

"(1) develop and disseminate accurate information on the status of bilingual vocational training in all parts of the United States;

"(2) evaluate the impact of such bilingual vocational training on the shortages of well-trained personnel, the unemployment or underemployment of persons with limited English-speaking ability, and the ability of such persons to acquire sufficient job skills and English language skills to contribute fully to the economy of the United States; and

"(3) report their findings annually to the President and the Congress.

"(b) The Commissioner shall consult with the Secretary of Labor with respect to the administration of this part. Regulations and guidelines promulgated by the Commissioner to carry out this part shall be consistent with those promulgated by the Secretary of Labor pursuant to section 301 (b) of the Comprehensive Employment and Training Act of 1973 and shall be approved by the Secretary of Labor before issuance.

"AUTHORIZATION OF APPROPRIATIONS

"SEC. 183. There are authorized to be appropriated $60,000,000 for the fiscal year ending September 30, 1978, $70,000,000 for the fiscal year ending September 30, 1979, $80,000,000 for the fiscal year ending September 30, 1980, $90,000,000 for the fiscal year ending September 30, 1981, and $80,000,000 for the fiscal year ending September 30, 1982, to carry out the provisions of sections 184, 186, and 188 of this part, except that 65 per centum of such amounts shall be available only for grants and contracts under section 184, 25 per centum shall be available only for grants and contracts under section 186, and 10 per centum shall be available only for grants and contracts under section 188.

"AUTHORIZATION OF GRANTS

"SEC. 184. (a) From the sums made available for grants under this section pursuant to section 183, the Commissioner is authorized to make grants to and enter into contracts with appropriate State agencies, local educational agencies, postsecondary education institutions, private nonprofit vocational training institutions, and to other nonprofit organizations expecially created to serve a group whose language as normally used is other than English in supplying training in recognized occupations and in new and emerging occupations, which shall include instruction in the English language designed to insure that participants in the training will be assisted to pursue such occupations in environments where English is the language normally used, and to enter into contracts with private for-profit agencies and organizations, to assist them in conducting bilingual vocational training programs for persons of all ages in all communities of the United States which are designed to insure that vocational training programs are available to all individuals who desire and need such bilingual vocational education.

"(b) The Commissioner shall pay to each applicant which has an application approved under section 189B an amount equal to the total sums expended by the applicant for the purposes described in section 185 and set forth in that application.

"USE OF FEDERAL FUNDS

"SEC. 185. Grants and contracts under section 184 may be used, in accordance with applications approved under section 189B, for—

"(1) bilingual vocational training programs for persons who have completed or left elementary or secondary school and who are available for education by a postsecondary educational institution;

"(2) bilingual vocational training programs for persons who have already entered the labor market and who desire or need training or retraining to achieve year-round employment, adjust to changing manpower needs, expand their range of skills, or advance in employment; and

"(3) training allowances for participants in bilingual vocational training programs subject to the same conditions and limitations as are set forth in section 111 of the Comprehensive Employment and Training Act of 1973.

"AUTHORIZATION OF GRANTS FOR INSTRUCTOR TRAINING PROGRAMS

"SEC. 186. (a) From the sums made available for grants and contracts under this section pursuant to section 183, the Commissioner is authorized to make grants to and enter into contracts with States, or educational institutions, either public or private, to assist them in conducting training for instructors of bilingual vocational training programs, and whenever the Commissioner determines that it will contribute to carrying out the purposes of this part, to make grants to, and enter into contracts with, States or educational institutions either public or private, to assist them in conducting training for instructors in bilingual vocational education programs.

"(b) The Commissioner shall pay to each applicant which has an application approved under section 189B an amount equal to the total sums expended by the applicant for the purposes described in section 187 and set forth in that application.

"USE OF FEDERAL FUNDS

"SEC. 187. Grants and contracts under section 186 may be used, in accordance with applications approved under section 189B, for—

"(1) providing preservice training designed to prepare persons to participate in bilingual vocational training or vocational education programs as instructors, aides, or other ancillary personnel such as counselors, and inservice and development programs designed to enable such personnel to continue to improve their qualifications while participating in such programs; and

"(2) fellowships or traineeships for persons engaged in such preservice or inservice training.

"AUTHORIZATION OF GRANTS FOR DEVELOPMENT OF INSTRUCTIONAL MATERIALS, METHODS, AND TECHNIQUES

"SEC. 188. (a) From the sums made available for grants and contracts under this section pursuant to section 183, the Commissioner is authorized to make grants and enter into contracts with States, public and private educational institutions, and to other appropriate nonprofit organizations, and to enter into contracts with private for-profit individuals and organizations, to assist them in developing instructional material, methods, or techniques for bilingual vocational training.

"(b) The Commissioner shall pay to each applicant which has an application approved under section 189B an amount equal to the total sums expended by the applicant for the purposes described in section 189 and set forth in that application.

"USE OF FEDERAL FUNDS

"SEC. 189. Grants and contracts under section 188 may be used, in accordance with applications approved under section 189B, for—

"(1) research in bilingual vocational training;

"(2) training programs designed to familiarize State agencies and training institutions with research findings and successful pilot and demonstration projects in bilingual vocational training;

"(3) experimental, developmental, and pilot programs and projects designed to test the effectiveness of research findings; and

"(4) other demonstration and dissemination projects.

"APPLICATIONS

"SEC. 189A. (a) A grant or contract for assistance under this part may be made only upon application to the Commissioner at such time, in such manner, and containing or accompanied by such information as the Commissioner deems necessary. Each such application shall—

"(1) provide that the activities and services for which assistance under this part is sought will be administered by or under the supervision of the applicant;

"(2) (A) in the case of assistance under section 184, set forth a program for carrying out the purposes described in section 185, "(B) in the case of assistance under section 186, set forth a program for carrying out the purposes described in section 187, and

"(C) in the case of assistance under section 188, set forth a program for carrying out the purposes described in section 189;

"(3) in the case of assistance under section 184, set forth a program of such size, scope, and design as will make a substantial contribution toward carrying out the purposes of this part;

"(4) in the case of assistance under section 186—

"(A) describe the capabilities of the applicant institution, including a listing of the vocational training or vocational education courses offered by that institution, together with appropriate accreditation by regional or national associations, if any, and approval by appropriate State agencies of the course offered,

"(B) set forth the qualifications of the principal staff who will be responsible for the training program, and

"(C) contain a statement of the minimum qualifications of the persons to be enrolled in the training program, a description of the selection process for such persons, and the amounts of the fellowships or traineeships, if any, to be granted to persons so enrolled; and

"(5) in the case of assistance under section 188, set forth the qualifications of the staff who will be responsible for the program for which assistance is sought.

"(b) No grant or contract may be made under section 184 directly to a local educational agency or a postsecondary educational institution or a private vocational training institution or any other eligible agency or organization unless that agency, institution, or organization has submitted the application to the State board established under section 104 of this Act, or in the case of a State that does not have such a board, the similar State agency, for comment and includes the comment of that board or agency with the application.

"APPLICATION APPROVAL BY THE COMMISSIONER

"SEC. 189B. (a) The Commissioner may approve an application for assistance under this subpart only if—

"(1) the application meets the requirements set forth in subsection (a) of the previous section;

"(2) in the case of an application submitted for assistance under section 184 to an agency, institution, or organization other than the State board established under section 104 of this Act, the requirement of subsection (b) of the previous section is met;

"(3) in the case of an application submitted for assistance under section 184 or section 186 the Commissioner determines that the program is consistent with criteria established by him, where feasible, after consultation with the State board established under section 104 of this Act, for achieving equitable distribution of assistance under this subpart within that State; and

"(4) in the case of an application submitted for assistance under section 186 the Commissioner determines that the applicant institution actually has an ongoing vocational training program in the field for which persons are being trained; and that the applicant institution can provide instructors with adequate language capabilities in the language other than English to be used in the bilingual job training program for which the persons are being trained.

"(b) An amendment to an application shall, except as the Commissioner may otherwise provide, be subject to approval in the same manner as the original application.

"Subpart 4—Emergency Assistance for Remodeling and Renovation of Vocational Education Facilities

"PURPOSE

"SEC. 191. It is the purpose of this part to provide emergency assistance, for a limited period of time, to local educational agencies in urban and rural areas which are unable to provide vocational education designed to meet today's manpower needs due to the age of their vocational training, in order to assist such agencies in the modernization of facilities and equipment and the conversion of academic facilities necessary to assure that such facilities will be able to offer vocational education programs which give reasonable promise of of employment, including the remodeling and renovation of such facilities to make the facilities comply with the requirements of the Act of August 2, 1968, commonly known as the Architectural Barriers Act of 1968.

"AUTHORIZATION OF APPROPRIATIONS

"SEC. 192. There are authorized to be appropriated $25,000,000 for fiscal year 1978, $50,000,000 for fiscal year 1979, $75,000,000 for fiscal year 1980, and $100,000,000 for fiscal year 1981, to carry out the purpose of this part.

"APPLICATIONS

"SEC. 193. (a) Any local educational agency desiring to receive assistance under this subpart shall submit to the Commissioner, through its State board, an application therefor, which application shall set forth—

"(1) a description of the facility to be remodeled or renovated, including the date of construction of such facility and the extent of reconstruction necessary to enable such facility to provide a modern program of vocational education;

"(2) a description of the equipment to be replaced or modernized with the assistance of funds made available under this subpart;

"(3) a description of the extent to which the modernization or conversion of facilities and equipment, if assisted with funds made available under this subpart, would be consistent with, and further the goals of, the five-year State plan developed pursuant to section 107;

"(4) the financial ability of the local educational agency to undertake such modernization without Federal assistance;

"(5) assurances that the facility to be remodeled or renovated will meet standards adopted pursuant to the Act of August 12, 1968;

"(6) the extent of State and local funds available to match Federal funds made available under this subpart, together with the sources and amounts of such funds;

"(7) such other information as the State board determines to be appropriate; and

"(8) such other information as the Commissioner may require by regulation.

"(b) In approving applications submitted under this subpart, the Commissioner shall apply only the following criteria;

"(1) the need for such assistance, taking into account such factors as—

"(A) the age and obsolescence of the facilities and equipment for which emergency modernization assistance is sought,

"(B) the rate of youth unemployment in the labor market area served by the local educational agency,

"(C) the number of youth aged seventeen through twenty-one residing in the labor market area served by the local educational agency who are unemployed, and

"(D) the percentage such youth represent, as compared with the vocational education enrollment in the local educational agency,

"(E) the ability of the facility to comply with the standards adopted pursuant to the Act of August 12, 1968 (42 U.S.C. 4151-4156), commonly known as the Architectural Barriers Act of 1968; and

"(2) the degree to which the modernization of facilities and equipment proposed in the application afford promise of achieving the goals set forth in the five-year State plan developed pursuant to section 107.

"(c) The Commissioner shall rank all approved applications according to their relative need for assistance and, except as provided in subsection (d), shall pay, from sums appropriated for this part, 75 per centum of the cost of such approved applications, until such appropriation shall be exhausted.

"(d) The Commissioner shall consult with the Administrator of General Services and the Architectural and Transportation Barriers Compliance Board to determine whether the proposed remodeling or renovation will meet standards adopted pursuant to the Act of August 12, 1968, commonly known as the Architectural Barriers Act of 1968.

"(e) Upon a finding, in writing, that a local educational agency with an approved application is suffering from extreme financial need and would not, because of the limitation of Federal financial assistance to 75 per centum of the cost of the approved project, be able to participate in the program authorized by this subpart, the Commissioner may waive such limitation and may pay the full cost of the approved project.

"PAYMENT

"SEC. 194. (a) Upon his approval of an application for assistance under this subpart, the Commissioner shall reserve from the appropriation available therefor the amount required for the payment of the Federal share of the cost of such application as determined under subsection (c) or (d) of section 193.

"(b) The Commissioner shall pay to the applicant such reserved amount, in advance or by way of reimbursement, and in such installments consistent with established practice, as he may determine.

"PART C—DEFINITIONS

"DEFINITIONS

"SEC. 195. As used in this Act—

"(1) The term 'vocational education' means organized educational programs which are directly related to the preparation of individuals for paid or unpaid employment, or for additional preparation for a career requiring other than a baccalaureate or advanced degree; and, for purposes of this paragraph, the term 'organized education program' means only (A) instruction related to the occupation or occupations for which the students are in training or instruction necessary for students to benefit from such training, and (B) the acquisition, maintenance, and repair of instructional supplies, teaching aids and equipment; and the term 'vocational education' does not mean the construction, acquisition or initial equipment of buildings or the acquisition or rental of land.

"(2) The term 'area vocational education school' means—

"(A) a specialized high school used exclusively or principally for the provision of vocational education to persons who are available for study in preparation for entering the labor market, or

"(B) the department of a high school exclusively or principally used for providing vocational education in no less than five different occupational fields to persons who are available for study in preparation for entering the labor market, or

"(C) a technical or vocational school used exclusively or principally for the provision of vocational education to persons who have completed or left high school and who are available for study in preparation for entering the labor market, or

"(D) the department or division of a junior college or community college or university operating under the policies of the State board and which provides vocational education in no less than five different occupational fields, leading to immediate employment but not necessarily leading to a baccalaureate degree, if it is available to all residents of the State or an area of the State designated and approved by the State board, and if, in the case of a school, department, or division described in (C) or (D), if it admits as regular students both persons who have completed high school and persons who have left high school.

"(3) The term 'school facilities' means classrooms and related facilities (including initial equipment) and interests in lands on which such facilities are constructed. Such term shall not include any facility intended primarily for events for which admission is to be charged to the general public.

"(4) The term 'construction' includes construction of new buildings and acquisition, expansion, remodeling, and alteration of existing buildings, and includes site grading and improvement and architect fees.

"(5) The term 'Commissioner' means the Commissioner of Education.

"(6) The term 'Secretary' means the Secretary of Health, Education, and Welfare.

"(7) The term 'handicapped', when applied to persons, means persons who are mentally retarded, hard of hearing, deaf, speech impaired, visually handicapped, seriously emotionally disturbed, crippled, or other health impaired persons who by reason thereof require special education and related services, and who, because of their handicapping condition, cannot succeed in the regular vocational education program without special education assistance or who require a modified vocational education program.

"(8) The term 'State' includes, in addition to the several States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Trust Territory of the Pacific Islands.

"(9) The term 'State board' means a State board designated or created by State law as the sole State agency responsible for the administration of vocational education, or for supervision of the administration of vocational education in the State.

"(10) The term 'local educational agency' means a board of education or other legally constituted local school authority having administrative control and direction of public elementary or secondary schools in a city, county, township, school district, or political subdivision in a State, or any other public educational institution or agency having administrative control and direction of a vocational education program.

"(11) The term 'State educational agency' means the State board of education or other agency or officer primarily responsible for the State supervision of public elementary and secondary schools, or, if there is no such officer or agency, an officer or agency designated by the Governor or by State law.

"(12) The term 'postsecondary educational institution' means a nonprofit institution legally authorized to provide postsecondary education within a State for persons sixteen years of age or older, who have graduated from or left elementary or secondary school.

"(13) The term 'eligible recipient' means a local educational agency or a postsecondary educational institution.

"(14) The term 'National Advisory Council' means the National Advisory Council on Vocational Education continued under section 162.

"(15) The term 'industrial arts education programs' means those education programs (A) which pertain to the body of related subject matter, or related courses, organized for the development of understanding about all aspects of industry and technology, including learning experiences involving activities such as experimenting, designating, constructing, evaluating, and using tools, machines, materials, and processes and (B) which assist individuals in the making of informed and meaningful occupational choices or which prepare them for entry into advanced trade and industrial or technical education programs.

"(16) The term 'disadvantaged' means persons (other than handicapped persons) who have academic or economic handicaps and who require special services and assistance in order to enable them to succeed in vocational education programs, under criteria developed by the Commissioner based on objective standards and the most recent available data.

"(17) The term 'low-income family or individual' means such families or individuals who are determined to be low-income according to the latest available data from the Department of Commerce.

"(18) The term 'cooperative education' means a program of vocational education for persons who, through written cooperative arrangements between the school and employers, receive instruction, including required academic courses and related vocational instruction by alternation of study in school with a job in any occupational field, but these two experiences must be planned and supervised by the school and employers so that each contributes to the student's education and to his or her employability. Work periods and school attendance may be on alternate half days, full days, weeks, or other periods of time in fulfilling the cooperative program.

"(19) The term 'curriculum materials' means materials consisting of a series of courses to cover instruction in any occupational field which are designed to prepare persons for employment at the entry level or to upgrade occupational competencies of those previously or presently employed in any occupational field.

"(20) For the purposes of this Act, the term 'administration' means activities of a State necessary for the proper and efficient performance of its duties under this Act, including supervision, but not including ancillary services."

RELATED AMENDMENTS

SEC. 203. (a) (1) Section 107(a) (2) (A) of the Comprehensive Employment and Training Act of 1973 is amended by redesignating clauses (iii) through (vii) (and any cross references thereto) as clauses (iv) through (viii) respectively, and by inserting immediately after clause (ii) the following new clause:

> "(iii) one representative of the State Advisory Council on Vocational Education created pursuant to section 105 of the Vocational Education Act of 1963;".

(2) Section 107(b) of the Comprehensive Employment and Training Act of 1973 is amended by adding at the end thereof a new paragraph (4) to read as follows:

> "(4) (i) identify, after consultation with the State Advisory Council on Vocational Education, the employment and training and vocational education needs of the State and assess the extent to which employment training, vocational education, vocational rehabilitation, and other programs assisted under this and related Acts represent a consistent, integrated, and coordinated approach to meeting such needs; and (ii) comment at least once annually, on the reports of the State Advisory Council on Vocational Education, which comments shall be included in the annual report submitted by the Council pursuant to this section and in the annual report submitted by the State Advisory Council pursuant to section 105 of the Vocational Education Act of 1963.".

(b) (1) Section 502(a) of the Comprehensive Employment and Training Act of 1973 is amended by striking out "eleven members" in paragraph (2) and inserting in lieu thereof "ten members", by redesignating such paragraph (2) (and any cross reference thereto) as paragraph (3), and by inserting immediately after paragraph (1) the following new paragraph:

> "(2) a representative of the National Advisory Council on Vocational Education created pursuant to section 162 of the Vocational Education Act of 1963; and".

(2) Section 503 of the Comprehensive Employment and Training Act of 1973 is amended by striking out "and" after paragraph (4), redesignating paragraph (5) (and any cross reference thereto) as paragraph (6), and by

inserting immediately after paragraph (4) the following new paragraph:

"(5) (i) identify, after consultation with the National Advisory Council on Vocational Education, the employment and training and vocational education needs of the Nation and assess the extent to which employment training, vocational education, vocational rehabilitation, and other programs assisted under this and related Acts represent a consistent, integrated, and coordinated approach to meeting such needs; and (ii) comment, at least once annually, on the reports of the National Advisory Council on Vocational Education, which comments shall be included in one of the reports submitted by the National Commission pursuant to this section and in one of the reports submitted by the National Advisory Council on Vocational Education pursuant to section 162 of the Vocational Education Act of 1963; and".

EFFECTIVE DATES AND REPEALERS

SEC. 204. (a) (1) Section 201 shall be effective upon date of enactment.

(2) Sections 202 and 203 shall be effective on October 1, 1977, except that—

(A) the amendments made by the revised section 102(d) (relating to an authorization of appropriations for planning) and section 107 (relating to planning during fiscal year 1977) shall be effective upon enactment, and

(B) the amendments made by section 103(a) (1) relating to reserving funds for the National Occupational Information Coordinating Committee) and section 161 (relating to the national vocational education data reporting and accounting system and the National Occupational Information Coordinating Committee and similar State committees) shall be effective upon enactment.

(b) Upon the effective date of section 202, individuals who are members of the State advisory councils on vocational education may continue to serve for the terms for which they were appointed, except that no such member may serve for more than two fiscal years after such effective date unless reappointed pursuant to the amendments contained in that section.

(c) Effective October 1, 1977, there are hereby repealed—

(1) title V, part F of the Education Professions Development Act.
(2) title X, part B of the Higher Education Act, and
(3) section 1071 of the Higher Education Act.

APPENDIX B

TEACHER SHORTAGE

$14,000 a year jobs go unfilled

Schools need agriculture teachers

By ROBERT McEWEN

Associated Press

FRESNO, Calif. — Thousands of unemployed teachers across the country would sell their souls for a job on a high school staff that paid $14,000 a year to start and required no experience.

But 18 such jobs in California and 400 nationwide went unfilled this year and an equal shortage of candidates is expected next year.

The apparent reason — not a lot of people want to each vocational agriculture.

Administrators of agricultural education programs at California colleges have been asking themselves why. It's not an unpopular field, yet the 600 California high schools that offer vocational agriculture courses are begging for certified teachers.

Lloyd Dowler, a professor of agricultural education at Fresno State University, is struggling to recruit students from the "vo-ag" teaching program here. He pinpointed some of the factors that have left vacancies in state schools the past five years.

For one thing, vo-ag teaching programs require a fifth year of training beyond the bachelor's degree, and many students who complete the first four years find themselves with plentiful job opportunities in private agribusiness industries.

"Some of our students are married with a family and they feel pushed to get a job and start earning a living as soon as possible," Dowler said.

"Others find that private industry offers superior fringe benefits, like a car or health insurance or dental benefits."

Dowler also finds a reluctance to deal with children.

"Not every person feels he's capable of handling discipline problems at the high school level," he said. "Many feel that in industry, they can associate with adults in a less demanding environment."

Still others dislike the regimental structure of a classroom, he added.

Dowler and officials at the four other state universities that operate such-teacher training programs — in Chicago, San Luis Obispo, Pomona and Davis — are advertising the advantages of teaching vo-ag.

Besides the high salaries paid to beginning teachers, Dowler said, retirement benefits compare favorably with private industry's.

Opportunities for women and minority students are excellent, he added. A number of scholarships are available and the percentage of job placements after graduation is high.

The training program also is spiced with variety. Students can specialize in subject areas like agricultural production, supplies and services, mechanized agriculture products and processing, ornamental horticulture, natural resources and forestry.

Vo-ag majors are given the opportunity to blend these in a fashion that suits their goals, and once they're employed, the subject matter allows great freedom to move out of the classroom for practical training on school-farm labs.

Some high schools have farm acreage exceeding 100 acres for their vo-ag classes, Dowler said.

Despite the attractions of the profession and the widespread efforts to publicize them, Dowler anticipates it will be a while before there are enough teachers with credentials to fill the large number of available jobs.

"I can't see us turning out enough teachers to meet the demand for another five to 10 years," he said.

--from THE ARIZONA REPUBLIC, December 19, 1976

APPENDIX C

STATE MANAGEMENT INFORMATION SYSTEMS

Sixteen States have adopted new systems or added to existing ones, or have made decisions to do so. Two States have abandoned individual student enrollment data collection, and are now getting only class totals. A brief description of the system in operation in each State was included in last year's Baseline report (Vol. IV), and the changes since then are shown below.

Alabama: Automated secondary student and fiscal accounting by program, school system, school, individual teacher and students (sex, ethnic origin, etc.); and source of funds. Automated manpower information to be added this year.

Alaska: Has had an automated MIS with individual student data at the secondary level since 1972. Follow-up data are supplied manually by teachers, and due to high mobility of the population this is felt to be the only feasible way to collect follow-up data in the State. Financial data compiled from school grant applications as reimbursement records include Federal, State, and local matching by school and occupational area, but not total direct and indirect expenditures.

Arizona: Automated systems, but secondary enrollment data are now collected by class instead of by individual student. Length of course, times offered per year, and class minutes per week are being collected, but the State has lost its ability to distinguish between different kinds of students in different occupational programs.

Arkansas: Automated MIS in operation since 1970-71 at secondary and post-secondary levels; includes individual student enrollment and follow-up data. Follow-up data supplied by teachers, validated by survey of random sample of students who completed programs. Expenditure data compiled from school records include Federal, State, and local matching by school and occupational area, but not total direct and indirect expenditures. Additional automation under consideration.

California: Partially automated system, no change.

Colorado: Student Accounting - completely automated, all secondary and post-secondary students identified, adult students reported by program. This system includes enrollment, placement and follow-up subsystems. Fiscal - reimbursement, equipment, voucher, subsystems operational and automated. Credentialed teachers automated. Active teachers automated.

Connecticut: Partially automated system, no change.

Delaware: Manual system, no change.

D.C.: Manual system, automated system being planned.

Florida: Automated system, no change. (Individual secondary and adult student enrollment, follow-up, and professional personnel data).

Georgia: Partially automated system, no change.

Hawaii: Partially automated system; presently undergoing changeover in secondary level MIS as component of larger system. Post-secondary MIS is obtained through the University of Hawaii's Student Information System through Community College Data Reports. The adult information and data on disadvantaged, handicapped and coop are manually retrieved and summarized.

Idaho: Manual system. Partial automation under development.

Illinois: The Illinois MIS is being assessed from the standpoint of data requirements under the new legislation and continued feasibility of collecting student-based data. As such, the current emphasis is on refining the supply and demand components in ten school districts while extensively field testing cost, follow-up and teacher supply/demand components of the system.

Indiana: Partially automated system, no change.

Iowa: Partially automated system, no change.

Kansas: Automated system, no change. (Individual student enrollment and follow-up date).

Kentucky: Automated system, no change. (Individual student enrollment data).

Louisiana: Manual system, no change.

Maine: Manual system, new system well into design stage. Propose to provide access by local schools to State's computer system for basic vocational data storage and processing. State Department of Educational and Cultural Services will have access to all data thus stored. Plan to have system tested in one regional site by end of fiscal year 1977.

Maryland: Previous automated MIS replaced by a new system with much greater information capability at considerable reduction in cost. Latest developments in both hardware and software have brought the ultimate in data collection processing, and accessibility within the range of ordinary budgets.

Massachusetts: Partially automated system, no change.

Michigan: Partially automated system, no change.

Minnesota: Partially automated system, no change.

Mississippi: Partially automated system, no change.

Missouri: Automated system, additional improvements and refinements being implemented. (Individual student enrollment, follow-up, and professional personnel data).

Montana: Partially automated system, no change.

Nebraska: Nebraska is presently in the final stages of piloting a student information system for vocational enrollees. This system was adopted from the Maryland RCU. A decision has not been made, at this time, regarding implementation on a statewide basis. A student follow-up of 1973 graduates from the pilot schools in Nebraska will be conducted during the spring of 1977.

Nevada: A new partially automated and partially manual system has been adopted using new data forms and procedures. Eventual goals are to eliminate numerical incongruity in data reported from one year to the next, to achieve a high degree of accuracy, and to establish a highly credible data base for Vocational Education which can be systematically updated on an annual basis.

New Hampshire: A new improved manual system developed under Federal research funds has replaced previous manual system. Individual student enrollment and follow-up data collected, but aggregated at department level. Potential for automation built into the system through collection of individual student data.

New Jersey: The partially automated system is still in developmental stage but has been updated to include files on equipment inventory and statewide cooperative program work stations as well as total program funding data.

New Mexico: Automated system, no change. (Individual student enrollment and follow-up data).

New York: Partially automated system.

North Carolina: Manual system, no change.

North Dakota: Partially automated system, no change.

Ohio: Automated system, no change. (Class-level data).

Oklahoma: Automated system, no change. (Individual student enrollment, follow-up, and professional personnel data).

Oregon: Partially automated system, no change.

Pennsylvania: Automated system, no change. (Individual student enrollment, follow-up, and professional personnel data).

Rhode Island: Automated system, no change. (Individual student enrollment and follow-up data).

South Carolina: Automated teacher-based system now in full operation. (Class-level data).

South Dakota: Manual system, no change.

Tennessee: Automated system, no change. (Individual student enrollment, follow-up, and professional personnel data).

Texas: Automated system, no change. (Individual student enrollment, follow-up, and professional personnel data).

Utah: Partially automated system, statewide MIS to be in operation by 1977.

Vermont: Manual system, no change.

Virginia: Partially automated system, changed from individual student enrollment data to class totals, with consequent loss of knowledge capability.

Washington: Automated system, no change. (School-level data).

West-Virginia: Automated system, no change. (Individual student enrollment, follow-up, and professional personnel data).

Wisconsin: Partially automated system, no change.

Wyoming: Manual system, no change.

APPENDIX D

DEFINITIONS OF VOCATIONAL EDUCATION TERMS

NASDVE Task Force
Clarence E. Burdette, Chairman

ADMINISTRATION

Means all of those functions, procedures, and techniques employed in planning, organizing, staffing, directing, controlling, and evaluating in accordance with established policies.

ADULT VOCATIONAL EDUCATION

Means a course or courses conducted for persons who have completed or left high school to prepare them to enter, re-enter, or to progress in the work force.

ANCILLARY SERVICES

Means those non-instructional activities, services, and functions carried out to support and improve the quality of vocational education programs.

AREA VOCATIONAL EDUCATION SCHOOL

Means (a) a specialized high school used exclusively or principally for the provision of Vocational Education to persons who are available to study in preparation for entering the labor market; or (b) a high school providing Vocational Education in no less than five different occupational fields to persons who are available for study in preparation for entering the labor market; or (c) a technical or vocational school used exclusively or principally for the provision of Vocational Education to persons who have completed or left high school and who are available for study in preparation for entering the labor market; or (d) the department or division of a junior or community college which provides Vocational Education in no less than five occupational fields leading to immediate employment but not leading to a baccalaureate degree, if it is available to all residents of the State or an area of the State designated and approved by the State Board. And, as in the case of a school, department, or division described in (c) or (d), it admits as regular students both persons who have completed high school and persons who have left high school.

CAREER EDUCATION

Means a process utilized in both school and community which enables individuals to make choices leading to success in life-long developmental patterns of living, learning, and working. It includes a sequence of educational experiences, throughout all of education, consisting of development of self awareness, career awareness, exploration of options, decision making and preparation in one or more alternatives to achieve the individual's career objective.

COMMUNITY COLLEGE

Means a two-year community based post-secondary institution which has authority to award an associate degree, a diploma, and/or certificate of completion, and which offers comprehensive educational services to the community, and may include: occupationally oriented programs, general education, preparation for transfer to a baccalaureate degree program at a four-year institution, continuing adult education, basic developmental education, and community services.

COMPLETION

Means that statistic which describes individuals, including early leavers, who have achieved their immediate objectives in preparation for entry or progressing in an occupational field and have left the Vocational Education program.

COOPERATIVE VOCATIONAL EDUCATION

Means an organized method of instruction in a vocational program designed to provide supervised on-the-job training, related vocational instruction, and required academic courses through a written cooperative agreement between the student, school, and employer.

DEVELOPMENT

Means a process of systematic inquiry which results in the creation of and/or improvement in a product, program, or situation.

DISADVANTAGED PERSON

Means that person who is unable to meet the criteria to enter into, or is unable to progress in or to complete a Vocational Education program because of: academic underachievement; difficulties with the English language; socio-economic and cultural background which impinges negatively on that person's motivation, attitude, and lack of knowledge of the world of work; and who, therefore, requires a supplemental program, modification of a regular program, or a special service to succeed in a Vocational Education program.

ENTREPRENEURSHIP

Means a business venture undertaken for profit making on an investment. Such term is identified with the functions of organizing and managing the factors of production and distribution of goods or services. It generally involves innovating and risk bearing.

EXPLORATORY WORK EXPERIENCE PROGRAM

Means a school program designed to provide students with paid or unpaid on-the-job work experiences in a variety of occupations, to help the students identify job traits in relation to their abilities and characteristics, and to assist them in making realistic and appropriate occupational choices.

GENERAL WORK EXPERIENCE

Means a school supervised program that provides experiences in a work environment to assist students, through part-time employment, to acquire the necessary human relations skills, work attitutes, and common knowledge required for successful employment.

HANDICAPPED PERSON

Means a mentally retarded, hard of hearing, deaf, speech impaired, visually impaired, seriously emotionally disturbed, crippled, or other health impaired person who, by reason of the handicapping condition, requires a special program, program modifications, or supplemental services in order to succeed in a Vocational Education program.

INDUSTRIAL ARTS

Means those educational programs organized for the development of understanding about all aspects of industry and technology, including learning experiences involving activities such as experimenting, designing, constructing, evaluating, and using tools, machines, materials, and processes, and which may assist individuals in the making of informed and meaningful occupational choices, or may prepare them for entry into advanced trade and industrial or technical education programs.

LOCAL EDUCATION AGENCY

Means a legally constituted public educational institution or agency responsible for operating and administering educational programs.

NONPROFIT SCHOOL

Means a private educational institution established and operated by an organization, from which no part of the net earnings accrues to the benefit of any private shareholder or individual.

NON PUBLIC (PRIVATE) SCHOOL

Means an educational institution established and operated by an individual or by an agency or organization other than a State, a subdivision of a State, or the Federal government, usually supported primarily by other than public funds. The control and operation of the school rests with other than publicly elected or appointed officials.

OCCUPATIONAL EDUCATION

Means any educational program with a direct career relationship. A broad generic term describing Vocational Education at the post-secondary level but not limited to any particular delivery system.

PARTNERSHIP

Means a type of business organization owned by two or more persons who have, by contract, agreed on the amount of their proportionate ownership in the business, as well as in the profits and liabilities accruing from it.

PERSONS WITH SPECIAL NEEDS

Means those persons who meet the criteria as handicapped or disadvantaged persons who require special programs, modification of programs, or supplemental services to help them succeed in a Vocational Education program.

POST-SECONDARY AREA VOCATIONAL EDUCATION SCHOOL

Means an area Vocational Education school, a majority of whose students have left or completed high school.

POST-SECONDARY EDUCATIONAL INSTITUTION

Means an academic, vocational, technical, home study, business, professional, or other school, college or university, or other organization or person offering educational credentials or offering instruction or educational services -- primarily to persons who have completed or terminated their secondary education or who are beyond the age of compulsory school attendance -- for attainment of educational, professional, or vocational objectives.

POST-SECONDARY VOCATIONAL EDUCATION

Means Vocational Education conducted for youth or adults who have completed of left high school and who are enrolled in an organized program of study in preparation for entering or progressing in the labor market.

PREPARATORY VOCATIONAL EDUCATION

Means education, training, or retraining in a vocation or within an occupational cluster in which a marketable skill is acquired for entry or reentry into the labor market.

PREVOCATIONAL EDUCATION

Means programs, services, or activities designed to provide youth and adults with orientation, guidance, exploration, and instruction to assist them in making meaningful career decisions and planning an appropriate Vocational Education program.

PREVOCATIONAL STUDENT

Means a person enrolled in a prevocational education program for the purpose of gaining information or experiences which will assist in making a vocational choice.

PROPRIETARY SCHOOL

Means a private educational institution established and operated by an individual, agency, or organization for profit.

PROPRIETORSHIP

Means an enterprise owned by one or more individuals, or an organization, who assume the profits and liabilities accruing from it.

RACIAL/ETHNIC CATEGORIES

Means:

American Indian or Alaskan Native - a person having origins in any of the original peoples of North America.

Asian or Pacific Islander - a person having origins in any of the original peoples of the Far East, Southeast Asia, or the Pacific Islands. This area includes, for example, China, Japan, Korea, the Philippine Islands, and Samoa.

Black, not of Hispanic Origin - a person having origins in any of the black racial groups.

Hispanic - a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish Culture or origin, regardless of race.

White, not of Hispanic Origin - a person having origins in any of the original peoples of Europe, North Africa, the Middle East, or the Indian subcontinent.

RESEARCH

Means a formal, intensive and systematic investigation which employs the scientific or problem-solving method and is directed toward the identification, clarification, and/or resolution of a problem.

RESIDENTIAL SCHOOL

Means an educational institution in which students are provided education programs and are offered board and lodging facilities owned or leased by the institution.

SECONDARY AREA VOCATIONAL EDUCATION SCHOOL

Means an area Vocational Education school, a majority of whose students have not received a diploma or certificate indicating completion of their secondary school education.

SECONDARY VOCATIONAL EDUCATION

Means Vocational Education provided to students who are in grades 7 through 12.

STATE BOARD OF VOCATIONAL EDUCATION

Means the single State educational agency designated or created under State law which is responsible for statewide policy, planning, administration, and supervision of the administration of Vocational Education programs at all levels.

STATE EDUCATION AGENCIES

Means those organizations responsible for the administration of education and/or supervision of the specified educational program responsibilities of the local education agencies in the State.

STATE PLAN

Means the description of the State educational efforts to administer, maintain, expand, and strengthen existing Vocational Education programs and to develop new programs.

SUPERVISION

Means those functions of technical assistance which coordinate and evaluate the activities of individuals to assure that action is taking place in accordance with plans and activities.

SUPPLEMENTARY VOCATIONAL EDUCATION

Means education and training to increase the skills, understandings, and appreciations needed by workers already in an occupation to upgrade or update their occupational compentencies.

TECHNICAL INSTITUTE

Means an institution which offers both practical and substantially theoretical education which leads to qualification for work as a technician.

VOCATIONAL EDUCATION

Means organized educational programs, services, and activities which are directly related to the preparation of individuals for paid or unpaid employment, or for additional preparation for a career requiring other than a baccalaureate or advanced degree.

VOCATIONAL PROGRAM

Means an educational plan under which action can be taken by an individual to achieve a vocational objective.

VOCATIONAL STUDENT

Means an individual with a vocational objective enrolled in a Vocational Education program leading to entry or progress in a chosen occupational field.

VOCATIONAL STUDENT ORGANIZATIONS

Means organizations for students enrolled in, or who have been enrolled in, Vocational Education programs, with national, State, and local units, the activities of which are an integral part of the instructional program.

WORK STUDY PROGRAM

Means a school program designed to provide financial assistance through part-time employment in nonprofit agencies for students who require such aid in order to enter or continue their education and training in a Vocational Education program. The part-time employment may or may not be related to the student's occupational objective or vocational program.

States That Say They Will Use The New Definitions	States Planning To Use New Definitions or Probably Will Use Them	States Waiting For Federal Action Requiring Use of New Definitions	States Opposed to Using New Definitions	No Decision
Dist. of Col. N. Dakota W. Virginia	Arizona California Connecticut Idaho Missouri Nebraska New Mexico Oregon	Alaska Ohio Oklahoma Virginia	Colorado Florida Indiana Maine Mississippi New York N. Carolina Rhode Island S. Dakota Tennessee	Alabama Arkansas Georgia Hawaii Illinois Iowa Kentucky Louisiana Massachusetts Michigan Minnesota Nevada New Hampshire New Jersey Pennsylvania S. Carolina Texas Utah Vermont Wisconsin Wyoming

States not accounted for: Delaware, Kansas, Maryland, Montana, Washington, and Puerto Rico.

APPENDIX E

ENROLLMENT BY SUBGROUPS WITHIN OCCUPATIONAL CLUSTERS IN SEVEN STATES

Subgroups	Total		Black not of Hispanic Orig.		Hispanic		Am. Indian or Alaskan Native		Asian or Pacific Islander		White, not of Hispanic Orig.		Female		Disadvantaged		Handicapped	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
TOTAL	825,543	100	70,509	8.54	12,768	1.55	2,980	0.36	2,200	0.27	737,086	89.28	440,122	53.31	43,787	5.30	4,392	0.53
Agriculture	91,782	100	4,169	4.54	292	0.32	177	0.19	55	6.06	87,089	94.89	8,581	9.35	6,906	7.52	652	0.71
Marketing	34,152	100	3,622	10.61	949	2.78	121	0.35	138	0.40	29,322	85.86	15,667	45.87	986	2.89	317	0.93
Health	79,036	100	5,259	6.65	499	0.63	166	0.21	150	0.19	72,962	92.31	63,859	80.80	990	1.25	115	0.15
Food Service	9,246	100	1,425	15.41	621	6.72	59	0.64	28	0.30	7,113	76.93	5,373	58.11	849	9.18	390	4.22
Accounting	16,481	100	1,007	6.11	218	1.32	62	0.38	89	0.54	15,105	91.65	7,792	47.28	2	0.01	0	0
Clerical	93,685	100	13,949	14.89	1,977	2.11	548	0.58	461	0.49	76,750	81.92	67,010	71.53	2,853	3.05	375	0.40
Secretarical	40,395	100	3,314	8.20	725	1.79	145	0.36	164	0.41	36,047	89.24	33,322	77.54	676	1.67	66	0.16
Mechanical	44,792	100	2,777	6.20	1,070	2.39	249	0.56	98	0.22	40,598	90.64	3,106	6.93	1,547	3.45	356	0.79
Construction	20,954	100	2,327	11.11	369	1.76	119	0.57	55	0.26	18,084	86.30	996	4.75	1,033	4.93	144	0.69
Electronics/Electricity	18,598	100	2,172	11.68	254	1.37	56	0.30	67	0.36	16,049	86.29	850	4.57	403	2.17	78	0.42
Metals	29,811	100	2,015	6.76	572	1.92	174	0.58	68	0.23	26,982	90.51	846	2.84	1,126	3.78	199	0.67
Child Care	9,749	100	891	9.14	186	1.91	42	0.43	15	0.15	8,615	88.37	8,060	82.68	141	1.45	75	0.77
Clothing	25,489	100	3,860	15.14	685	2.69	64	0.25	72	0.28	20,808	81.64	22,793	89.42	330	1.29	124	0.49
Institutional & Home Management	137,955	100	8,808	6.38	2,292	1.66	343	0.25	279	0.20	126,233	91.50	115,050	83.40	201	0.15	57	0.04
Drafting	6,101	100	919	15.06	80	1.31	28	0.46	18	0.30	5,056	82.87	714	11.70	226	3.70	40	0.66
Graphics	6,765	100	1,234	18.24	180	2.66	40	0.59	38	0.56	5,273	77.95	2,092	30.92	245	3.62	139	2.05
Service	33,856	100	3,721	10.99	589	1.74	117	0.35	65	0.19	29,364	86.73	10,728	31.69	1,249	3.69	310	0.92
Forest Products	3,292	100	293	8.90	4	0.12	12	0.36	2	0.06	2,981	90.55	261	7.93	746	22.66	351	10.66
Unknown Occup. Clusters	8,893	100	1,557	17.51	33	0.37	24	0.27	44	0.49	7,235	81.36	4,352	48.94	5	0.06	1	0.01
Special Programs	114,511	100	7,190	6.28	1,173	1.02	434	0.38	294	0.26	105,420	92.06	68,670	59.98	23,273	20.32	603	0.53

APPENDIX F

PROJECT BASELINE'S PUBLICATIONS REQUESTED
DURING FIVE YEAR PERIOD

Title	Number printed	Number requested
1. LEARNING A LIVING ACROSS THE NATION VOL. I	2,000	3,009
2. LEARNING A LIVING ACROSS THE NATION VOL. II	2,000	3,016
3. LEARNING A LIVING ACROSS THE NATION VOL. III, PART 1	2,000	3,193
4. LEARNING A LIVING ACROSS THE NATION VOL. III, PART 2	2,000	3,191
5. THE IMPACT OF VOCATIONAL EDUCATION AND MANPOWER TRAINING ON TARGET POPULATIONS	2,000	3,296
6. THE IMPACT OF VOCATIONAL EDUCATION RESEARCH AT FEDERAL AND STATE LEVELS	2,000	2,867
7. A DATA BASE FOR VOCATIONAL EDUCATION AND MANPOWER TRAINING	2,000	2,973
8. WOMEN IN VOCATIONAL EDUCATION	2,000	3,386
9. THE PREPARATION OF TEACHERS FOR VOCATIONAL EDUCATION	2,000	2,879
10. THE APPRAISAL OF MANPOWER TRAINING PROGRAMS ESTABLISHED BY CONGRESS IN THE 60'S	2,000	2,966
11. THE IMPACT OF VOCATIONAL EDUCATION AND MANPOWER TRAINING ON THE LABOR MARKET	2,000	2,963
12. CAREER EDUCATION IN THE U.S. TODAY	2,000	2,868
13. A REPORT TO THE NATION ON VOCATIONAL EDUCATION	3,000	3,923
14. LEARNING A LIVING ACROSS THE NATION VOL. IV, PART 1	3,000	3,066
15. LEARNING A LIVING ACROSS THE NATION VOL. IV, PART 2	3,000	3,065
16. VOCATIONAL EDUCATION PLANNING IN THE STATES	2,000	3,001

APPENDIX G

THE MAILING LIST FOR BASELINE REPORTS

The Baseline mailing list has been divided into twenty-seven categories, and five of these are broken down into the organizations and institutions with which individuals requesting copies of Baseline reports are associated.

BREAKOUT OF MAILING LIST*

TOTAL PEOPLE 5,056

1. U.S. Congress 201
2. USOE 147
3. Federal Manpower 67
4. Other Federal Agencies 42 (see below)
5. State Departments of Education 1,346
6. State Advisory Councils 260
7. State Legislatures 2
8. State Manpower 203
9. State Voc. Lic. & Registration 22
10. Other State Agencies 87 (see below)
11. State Organizations 4 (see below)
12. Universities and four yr. Colleges 1,194
13. Community Colleges 180
14. School Districts 79
15. Secondary Schools 72
16. Tech. Schools 128
17. Elem. Schools 10
18. Libraries 93
19. Nat'l Research Organ. 153
20. Nat'l Vocational Organizations 92
21. Nat'l Organizations 49 (next page)
22. Ed. News Media 57
23. Trade Schools 11
24. Labor 6
25. Private Firms 87 (next page)
26. Individuals 458
27. Foreign Countries 6

Further Breakdown of Five Categories in Mailing List

4. Other Fed. Agencies 42
    - ERIC 7
    - U.S. Navy (Recruiting) 4
    - U.S. Air Force 2
    - White House 1
    - Bureau of the Census 2
    - Lib. of Congress 3
    - HEW - Office of Aging 1
    - NACVE 22

10. Other State Agencies 87
    - State Dept. of Health 1
    - State Bureau of Budget 10
    - State Vocational Rehabilitation 8
    - State Parole Center 1
    - Governor's Office 63
    - State Board of Com. Colleges 2
    - State Board of Education 1
    - State Board of Regents 1

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* Breakout is of individuals from each category

11. State Organizations 4
- State Educational Assoc. 2
- State Board of Public Contractors 1
- State Teachers Assoc. 1

21. Nat'l Organizations 49
- Nat'l Home Study Council 1
- U.S. Chamber of Commerce 1
- Nat'l League of Cities 3
- Nat'l Alliance of Businessmen 3
- Nat'l Assoc. of Educ. Broadcasters 2
- Modern Language Assoc. of America 2
- Nat'l Academy of Engineers 1
- Nat'l Assoc. of Independent Schools 4
- YMCA 1
- Nat'l Assoc. of School Boards 6
- Nat'l Assoc. of State Univ. & Land Grant Colleges 5
- U.S. Catholic Educ. Conference 1
- Nat'l Citizens for Educ. Freedom 1
- Nat'l Assoc. for Mex. Am. Educ. 1
- Nat'l Community Action Council 1
- Amer. Council on Educ. 3
- YWCA 1
- Nat'l Jewish Vocational Council 5
- Public Educ. Assoc. 1
- Affirmative Action for Women 1
- PHI BETA KAPPA 3
- Nat'l Board of Private Bus. Schools 1

25. Private Firms 87
- Arthur D. Little Co. 2
- Automated Info Services 2
- Bechtell Power Co. 2
- Bell & Howell 1
- Bookstore 2
- Boxandall Co. 2
- Bustrante & Co. 1
- C & Rop Inc. 1
- Channing Bete Co. 1
- Charles F. Hurley Employment 1
- College Entrance Exam Board 1
- Consolidation Coal Co. 2
- Educ. Marketing Inc. 2
- Educational Testing Service 9
- Forest Products Co. 1
- GED Testing 1
- Gestetner Corp. 2
- Graham Assoc. 1
- Info Concepts Inc. 2
- Inland Steele 2
- Law Firms 6
- Management Consultants 4
- Marfax Assoc. Inc. 2
- Mkt. Data Retrieval Inc. 1
- Morris Assoc. 1
- Multilevel Inc. 1
- Nat'l Assoc. of Private Trade Schools 1
- Navajo Eng. & Constr. Co. 1
- Program Funding Inc. 2
- R & J Associates 2
- Radio Station KJJJ 1
- Rhodes & Assoc. 1
- Sandia Labs 1
- Si er Co. 3
- System Sciences Inc. 3
- Tadlock Assoc. 2
- Tech. & Ind. Consultants 1
- Teledyne Co. 4
- Universal Educ. Co. 2
- User Material Develop. Co. 1
- Van Alstyne, Noll & Co. 1
- Western Elec. 2
- Weston Assoc. 1
- Whirlpool Corp. 2
- World Trade Center 1

Received June 8, 1976

APPENDIX H

TRANSFER OF PROJECT BASELINE UNIQUE DEVELOPMENTS TO THE BUREAU OF OCCUPATIONAL AND ADULT EDUCATION

MEMORANDUM

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF EDUCATION

TO : William F. Pierce
Deputy Commissioner, BOAE

DATE:

FROM : Arthur M. Lee
William G. Conroy, Jr. W.G.C.Jr.

SUBJECT: Transfer of Project Baseline Unique Developments to the Bureau of Occupational and Adult Education

For the past several years, Project Baseline (PB) served the United States by reporting the status of occupational education through a careful analysis of data similar to those collected by the Bureau of Occupational and Adult Education (BOAE), and from other sources. These status reports, augmented by supplemental reports, have been of general interest as shown by extensive references and reviews in the national educational press and by popular demand.

Since BOAE (with NCES) will assume full responsibility for reporting on the status of occupational education in the United States, beginning with school year 1975-76, PB will complete its responsibility to the nation with its school year 1974-75 status report. Because of this, Arthur M. Lee and William C. Conroy, Jr., met on April 28, 1976 in Phoenix, Arizona to plan how best to transfer from PB to BOAE the data base and essential services developed by PB in its vocational education status reporting responsibility. The process for specifying and transferring these data and services must fall within the scope of the current agreement between BOAE and PB. The transfer reflects the concern on the part of PB and BOAE to provide for the public good.

On April 28, 1976, Dr. Lee agreed to provide Dr. Conroy with a list of essential PB services and to recommend procedures for transferring these services to BOAE, and to arrange transportation of PB's entire five-year data base on magnetic tape together with computer software used in producing single-year and longitudinal tables and analyses within the time and fiscal scope of PB's current contract with BOAE. (List and recommendations attached.) Dr. Conroy agreed to facilitate the transfer of PB's data base whenever possible and to incorporate it into the National Information System for Occupational and Adult Education (NISOAE) when feasible.

In addition, Dr. Lee agreed to participate (to the extent possible) within the constraints of the current contract in the development of prototype NISOAE.

Description of Data Base:

All data elements listed in computer printout tables in Volumes IV and V of Learning a Living Across the Nation, including both current year and longitudinal data beginning with school year 1970-71. Data currently maintained in a matrix from which comparison and longitudinal tables are printed out. Software includes updating procedures and programming for printouts. The PB contractor uses an IBM 360/370 compatible, 9-track, with 800/1600 BPI.

List of Services Provided by Baseline:

1. Procedures for quality control in which all data received from each state are compared with those from previous years and from other States, and verified on the basis of logic. All apparent or suspected discrepancies are discussed with the appropriate State agency personnel. Corrections are made when so advised by the States, and explanations received for discrepancies resulting from unusual circumstances.

2. Annual assessments of data quality based on methods of individual State collection, State and local quality control, and State compilations; procedures for continuous discussions with individual States on methodological improvements resulting in improved data quality; and periodic public discussions of data quality and evidence of improvement.

3. Procedures through which States review their own data in final tabular form before publication to verify integrity of data.

4. Procedures for continuous updating of data received from the States, including prior year corrections, so that all longitudinal data tables contain latest and most accurate data available.

5. Analysis and interpretation of annual vocational education statistics, and publication of annual reports.

6. Special studies of particular aspects of vocational education, contracted for by experts in the field or carried out by the staff, and publication of the results of these studies as Supplemental reports.

7. Preparation and distribution annually of a statistical profile of each State showing changes since 1970-71, and visual presentation of regional summaries.

8. Serving as an information clearinghouse on vocational education by providing specific and general information as requested by telephone and mail.

Recommendations for Transferring Data Base and Essential Services:

1. PB to deliver copies of all data tapes, software, and documentation in whatever form and specifications requested, provided funds in PB's current budget are authorized for the preparation of such tapes and documentation, and provied that Mountain States Computing, the data processing contractor for PB, can do so on a schedule mutually agreeable to Mountain States Computing and BOAE. The cost will not increase PB's estimated budget for the current year.

2. BOAE should establish quality control procedures similar to and at least as effective and acceptable to the States as those developed by PB. This quality control should be in place of or in addition to activities currently performed by the regional offices. Included in quality control should be the means of immediately identifying significant variances in data received, checking back with the States for explanations, and noting both the variances and explanations in the annual reports.

3. BOAE's quality control function should continue to follow closely all developments in the individual States of new data collection and compilation procedures intended to improve data quality, and should provide assistance wherever possible in initiating and implementing such developments. Periodic public discussion of vocational education data quality including written reports, should be provided by BOAE.

4. BOAE should produce for school year 1975-76 two publications as PB has done: a statistical almanac, and a narrative report on the status of vocational education in the United States. If this is not done, a serious gap will be created between PB's last annual report and the first reports which may be required under the new vocational education legislation of 1976. In producing these reports and subsequent reports under the 1976 legislation, it is highly desirable to allow each State to make a final check of data in the form in which they are being used before publication. This intercepts occasional errors which have escaped previous scrutiny, and gains cooperation and confidence in the annual report by the State agency personnel.

5. Both BOAE for school year 1975-76, and NCES for subsequent years, should follow continuous data updating procedures similar to those developed by PB.

6. BOAE if possible, but certainly NCES, should produce and supply to each State an annual vocational education statistical profile and regional summary. These should be available to the public on request.

7. BOAE should, in staffing for these additional activities, include ample time and cost to serve the clearinghouse function PB has found to be so much in demand.

8. BOAE should use an advisory panel preferably to meet twice each year for the follwoing purposes: A meeting in the fall to consider kinds of data to be collected in addition to statistical reports such as current status of teacher shortages and private school data; and a spring or summer meeting to consider the previous year's statistics for analysis and interpretation before preparation of the annual report.

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